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The Wind, E.T.

Dahlia

Blue Book

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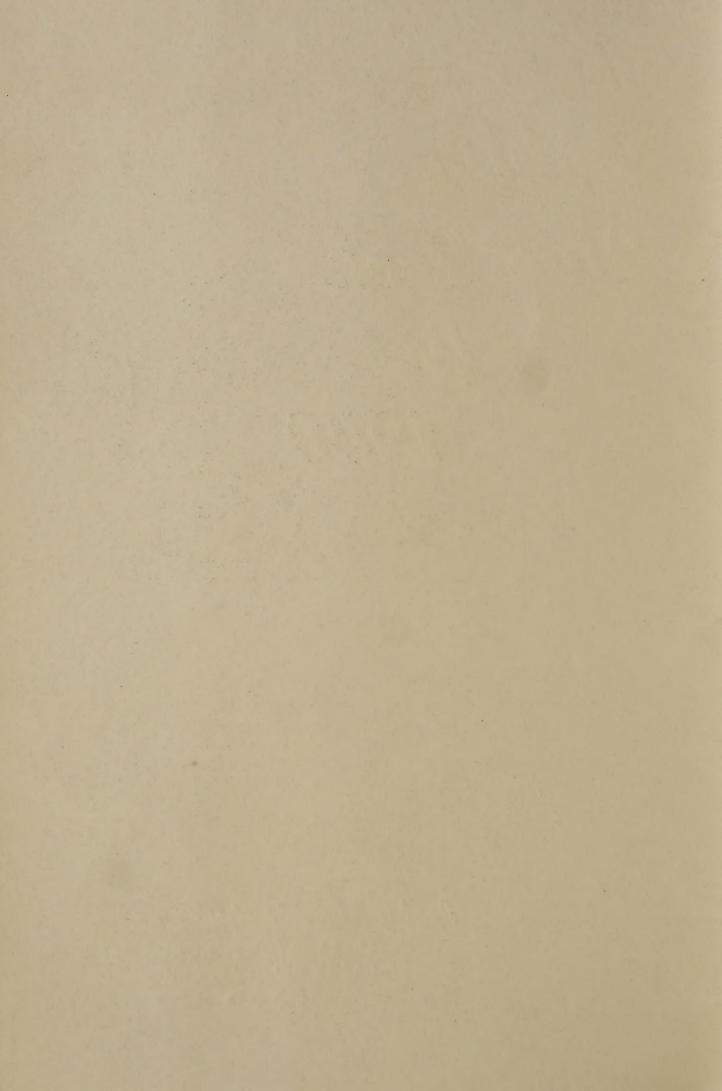
FEB 13 1948 *

U. S. Department of Agriculture

ia Book for 1948



Rocky River Dahlia Gardens
19111 STORY ROAD
ROCKY RIVER 16, OHIO



GREET INGS

E. J. WIND

The 1948 DAHLIA BLUE BOOK is the eighteenth issue of our annual catalog. It is intended as an aid in the selection and culture of better dahlias. It presents one of the finest collections of dahlias in America. It offers the most complete and up-to-the-minute cultural directions of any catalog. It is your assurance that quality has always been our aim. Clean, healthy stock and proper cultural methods mean greater pleasure from your garden.

During the past season we attended five large dahlia shows: Cleveland, East Liverpool, New York, Washington and Birmingham, and visited many gardens in these sections. We visited three of the official trial grounds of the American Dahlia Society; Rutgers University, University of Maryland, and Ault Park, Cincinnati. At these shows and gardens we obtained much which, in various ways, will be reflected in our service to you.

As in the past, we use the DAHLIA BLUE BOOK to say THANKS to our friends and customers for all favors. Thanks, also, to those who contributed so much to our pleasant visits at shows and gardens, and to those who visited us during the year here at Rocky River. THANK YOU.

General Information

PLEASE READ CAREFULLY

ORDER EARLY

Early orders have first call on varieties which are in limited supply. Also the earlier you order the more likely that your order will be shipped at the time you request. During the heaviest shipping periods, more orders are booked for shipment on specified days than can possibly be handled on those days so they are shipped in the order in which they are received.

DEPOSITS

No deposit is required. Just send in your order. Pay anytime before shipping date.

PLANT ORDERS

Plant orders are booked for shipment on the date specified by the purchaser. Shipments will be made as nearly on time as possible, subject to priority in ordering and other factors beyond our control, such as: the failure of a variety to produce cuttings early or in the quantity normally expected, inability to "harden off" plants out-of-doors preparatory to shipment because of severe weather, freezing temperaurtes at time shipment should be made, periods of heavy rains which slow up gathering of orders from the cold frames and the actual packing of the wet plants and saturated soil, strikes or threatened strikes affecting transportation or materials required in packing the orders. Kindly bear these factors in mind if your order does not reach you when expected, and rest assured we will do our utmost to get your order to you as promptly as conditions will allow.

Sometimes part of your order may be shipped at one time and the balance later when the plants become available. In the event we are unable to complete the order a refund will be made by check (stamps in amounts of less than one dollar) at a later date. During the heavy shipping season there may be a delay of as much as four or five weeks in the mailing of refunds. No credits are carried over from one year to another. If your refund has not been received by July 1st, notify us and the matter will be given prompt attention.

SUBSTITUTION

We never substitute one variety for another unless specifically requested to do so. If you have second or third choices you may list them on the order.

POSTAGE

We pay the regular postage on all retail orders but we urge that customers send enough to cover special delivery or special handling postage charges on all plant orders. Plants received in poor condition will not be replaced unless special delivery or special handling postage was included with payment. Add twenty-five cents for special delivery, or if you do not have special delivery service from your post office, add fifteen cents for special handling. Special delivery and special handling are postal services which give priority to parcels at all postal terminals and often result in your receiving the parcel as much as a week sooner than if sent by regular parcel post. Wholesale orders are F.O.B. Rocky River.

GUARANTEE

All stock shipped by the Rocky River Dahlia Gardens is guaranteed to be true to name, free from disease, and in good growing condition upon its arrival at its destination. Stock failing to meet these conditions should be reported just as soon as the failure becomes apparent if replacement is desired. We assume no responsibility other than replacement.

EXPORTS

Customers in other countries should obtain import permits from their department of agriculture and the necessary information regarding importation into their country. If no permit is required that fact should be stated on the order.

SALES TAX

Residents of Ohio must include the three per cent sales tax with remittance.

TELEPHONE

EDison 0836 (Cleveland).

ABBREVIATIONS

The letters immediately following the name of the variety are the key to the American Dahlia Society (A.D.S.) official classification of that variety.

Classification of varieties in our 1948 DAHLIA BLUE BOOK is that of 1947. The American Dahlia Society and the Central States Dahlia Society have each published a classification in the past. These lists were dissimilar in some respects. During the past season a desirable unification of these lists has been attempted. Excellent progress has been made, but because of the great amount of work and correspondence necessary, this new, uniform list is not available as the DAHLIA BLUE BOOK goes to press. While the classification of many varieties will remain the same, it is advisable that exhibitors check the classifications herein against the new list before making entries at the shows. Key to abbreviations follow:

CLASSIFICATION

Size

A-Large (Exhibition), 8 inches or over B—Medium (Cut flower), 4 to 8 inches
Ba—Ball, 3½ inches or over
M—Miniature, under 4 inches
Pom-Pompon for exhibition purposes must be under 2 inches in diameter

Type of Flower

An-Anemone Ba-Ball Coll-Collarette C—Cactus, any type, old classification D—Decorative, any type, old classification FD-Formal Decorative IC—Incurved Cactus
ID—Informal Decorative Mig—Mignon
O—Orchid Flowering
P—Peony Pom-Pompon S-Single SC—Semi-Cactus StC—Straight Cactus Star-Star

Color

Bi-Bi-color, two distinct clear and separate colors on the face of the floral rays; tricolors are included

BI—Blended, no clearly distinct color, but two or more intermingled colors which may contrast or harmonize. A single color shading lighter does not constitute a blend Var—Variegated, two or more distinct colors on the face of the floral rays, arranged in dots, flecks, splashes, or narrow lines which contrast with the ground color

L—Lavender mauve, mallow pink, phlox pink, lilac

Or—Orange, buff, russet, copper, apricot, coral red, bronze, but not orange red hues that contain more red than orange

Pi—Pink, cameo, salmon, rose, old rose, violet rose, tyrian rose
Pu—Purple, violet, rosy magenta, purple reds, amaranth purple
R—Red, crimson, scarlet, cardinal, carmine, garnet, maroon
W—White, including ivory and cream
Y—Yellow, straw, sulphur, lemon, primrose apricot yellow, golden yellow



DAHLIA GREEN PLANT

Dahlia Green Plants

Dahlia "green plants" or simply "plants" as we refer to them in this book are little dahlia plants grown from cuttings. The cuttings are taken from selected clumps which are started into growth in the greenhouses during the late winter months. As soon as the sprouts are long enough to handle, they are taken off and placed in a special rooting medium. When the cuttings are rooted they are potted into three inch pots in a soil selected, or prepared to hold together in shipment.

After potting, our plants are carefully grown and constantly watched to insure

plants of highest quality. At just the right time they are moved from the greenhouses into cold frames for the extremely important and exacting "hardening" process.

Our plants are shipped to all parts of the country in paper shipping pots, carefully packed to insure safe arrival. (See the paragraph on plants under "CULTURAL HINTS" in the back of this book.)

Properly grown plants produce flowers as early as flowers are produced from roots. As a rule the flowers from plants are superior. Growth, and total productivity of bloom, are equal to bushes grown from roots. Good clumps are formed for carrying the variety over winter. Plants are sold cheaper, not because of any difference in their worth, but because by use of careful propagation methods we are able to produce several plants from one root.

Rooted Cuttings

Altho we do not recommend the purchase of rooted cuttings by any who have had no previous experience with them, except on a trial at purchaser's own risk, we will furnish high grade, well rooted cuttings of varieties which are listed in plants in this book. Prices are one third **less than** the price of a plant of that same variety. Rooted cuttings are guaranteed to reach the purchaser in growing condition if sent by "special delivery" or "special handling" parcel post, but we can not assume responsibility for loss of the cuttings once they have been received in good condition.

When cuttings are received they should be planted at once and watered well. For the first two or three days they should be protected from direct sunlight and draughts. By the end of that time, the roots will have started to establish themselves in the soil, and a gradual exposure to sun and normal growing conditions should be made. Rooted cuttings do require some attention for the first few days, but once past that stage they will develope into fine plants with gratifying results.

Rooted cuttings may be obtained four to six weeks before time to plant in the garden, planted in pots or plant bands and grown into good sized, strong plants by

the time to plant outside. Or, as some prefer, they may be purchased for delivery a week or ten days before intended planting in the garden, gradually hardened to outside conditions and then set right into the garden as one would any other unpotted plant. This method requires a little more attention to details of conditioning the cuttings, but has the advantage of better and straighter roots when the clumps are dug the next fall.

Pot Roots

We are offering a limited number of "pot roots" of some of the varieties listed in the DAHLIA BLUE BOOK. These are entire clumps consisting of one or more roots, usually about the size of a walnut, grown in three inch flower pots. Performance of pot roots is equally as good as from field grown roots. They are excellent planting stock, and are also suitable for propagation when only a few plants are wanted quickly.

We suggest getting the pot roots at least a month before time to plant in the garden. When the roots are delivered, place them on moist soil, or cover lightly with loose soil or peat moss in a fairly warm place, where they can be protected from frosts. A cold frame is ideal for this. The roots will sprout and grow into fine plants by the time to plant in the garden, at which time they can be lifted and moved to their permanent spot in the garden without noticeable checking of growth.

Pot roots have long been a favored dahlia planting stock in Europe and the practice is gaining rapidly here. Pot roots are especially recommended to those who fail to get satisfactory clumps from green plants.

New Insecticides

Red Spider (see page 46) continued to be the most serious pest of dahlias during 1947, especially where DDT was used to control other pests. None of the newer materials have proven entirely satisfactory, altho proper use of them result in good control of red spider.

Preliminary tests of a new product, as yet un-named but designated as No. 3422 by the American Cynamid Co., has appeared to be an ideal, safe control for red spider. This product (aryl alkyl thionophosphate) also controls most of the pests controlled by DDT and others besides. Some entomologists believe it will almost entirely displace DDT. At present it appears to be the "one shot" spray material for all dahlia pests. It will be thoroughly tested at Rocky River Dahlia Gardens in 1948.

Unfortunately, this mysterious new chemical may not be available for general use during the coming season. We mention it here, now, so that if it should be put on the market in time for use in 1948, our customers will be aware of it's potentialities. If it should be available, by all means try it.

A new product, sold under various trade names, but containing the active ingredient "chlordane", has proven far superior to other materials for the control of grasshoppers and cucumber beetles, two serious pests of dahlias in some sections, not effectively controlled by DDT. (See page 46).

Dahlia Seed

We offer the finest seed available; from the same source, and varieties, which produced such outstanding varieties as Jane Lausche, Mrs. E. J., Windlassie, Black Monarch, Mrs. Hester A. Pape, and scores of other Honor Roll and Certificate of Merit dahlias. See page 41 for prices.

ROCKY RIVER INTRODUCTIONS

BARBARA VEIRS S.C. (Veirs-Rocky River)
Brilliant reddish-purple, a color that stands out in the garden. Twisting serrated petals give the blooms a distinctive appearance. Good, well proportioned stems hold the flowers facing the side. It is a strong grower with heavy, dark foliage. In the two years we have grown this variety, from one of Ohio's pioneer dahlia growers, we have never had a plant stunt.

BARBARA VEIRS is on Mr. Dudley's Eastern Honor Roll and was awarded a Certificate of Merit at the American Dahlia Society's official trial ground at East Lansing, Michigan. Size 10x5.

Root \$10.00, Plant \$3.50 prices net



BARBARA VEIRS



GREAT LAKES

GREAT LAKES I.D. (Marsh-Rocky River).

An early, white informal with a demonstrated ability to win at the shows.

Early blooms may be slightly tinted with lavender. An easy to grow variety which blooms very early and profusely, holding full centers thruout. Clean, stiff stems hold the flowers well above the tall plants. An open grower with slender canes. Size 10x5.

GREAT LAKES has the enviable record of three American Home Achievement Medals, and being included on all three Honor Rolls. Achievement Medals at Milwaukee (blooms grown by Mr. George Currie), Hamilton Park (blooms shown by Mrs. Marsh), and Birmingham (blooms by Dr. H. C. Rike).

Root \$15.00, Plant \$5.00 prices net

ROCKY RIVER INTRODUCTIONS

RED GLAMOUR I.D. (Wolbert-Rocky River). Big and bright, this red is one that might easily be the sensation in the garden. The color is a medium shade of red with no purple or gold tints. It has been shown 13½x10 inches. Like so many of the large ones, the stems sometimes seem short in proportion to the massive flowers. Does exceptionally well in cooler weather with plenty of water, and can stand forcing. Great things can be accomplished with it by those who like to "play with" a variety to get the maximum from it.

RED GLAMOUR was awarded a Certificate of Merit at the A.D.S. Trial Grounds at U. of Maryland. Blooms grown and shown by Mr. Wolbert, the originator, won the American Home Achievement Medal at Louisville. It is on all three Honor Rolls.

Root \$15.00, Plant \$5.00 prices net



RED GLAMOUR



BO BO

BO BO MFD (Franks-Rocky River). A miniature formal of unusual attractiveness. Blooms are small, seldom over two and a half inches. The color is a rich empire yellow flushed scarlet on outer edge of petals and in the center of the blooms. Excellent stems and a good keeper. It is a grand addition to the collection of any exhibitor, being a free bloomer, the flowers hold full centers, and a large percentage of the blooms are "specimens".

BO BO is the only miniature being introduced this season that is on all three Honor Rolls. It was the winner of the American Home Achievement Medal at the Irvington, N. J. show, on honor usually reserved for the "big fellows". It was awarded the American Dahlia Society Silver Medal in the miniature seedling class at New York.

Root \$5.00, Plant \$2.00 prices net

ROCKY RIVER INTRODUCTION



GOLD DUST

GOLD DUST Pom (Goddard-Rocky River)

A fine exhibition pom for the gold class, a class almost void of competition. Blooms are tiny, well quilled and rounded back to the stems. Most stems are of adequate length for exhibition. It blooms very early and most profusely. It will produce blooms that will be competitors for "smallest bloom" class.

GOLD DUST is the only pom appearing on any of the Honor Rolls, and it is on all of them. It was awarded Certificates of Merit at East Lansing and Cincinnati trial grounds. It has been a winner at many shows as a seedling, sometimes winning as the best pom in the show.

Root \$3.00, Plant \$1.50 prices net

New Novelties for 1948

Each year we select, what we believe to be the best, new varieties being released for the coming season. A number of these are listed below at introducer's prices.

All are on one or more of the three Honor Rolls as published in the December issue of FLOWER GROWER magazine. Descriptions used below are those of one of the three writers; R. T. Eddy of the Western, J. Louis Roberts of Midwestern, and Lynn B. Dudley of Eastern Honor Roll. Author of each description is credited at the end of his quotes.

ANN TOOKER I.D. (Tooker) "This is a pure white, eleven to twelve inches across and seven to eight inches deep. The wavy, long petals give the bloom a pleasing form. Stems are twelve to fifteen inches; the bush six to eight feet and spreading. This is a medium late bloomer and likes fertilizer, water and full sun. It won the Achievement Medal at New York and at the Long Island show in Jamaica." (Dudley) on Eastern and Midwestern Honor Rolls.

Prices net-Plant \$7.00, Two plants \$12.00, Three plants \$15.00

ATOMIC YELLOW S.C. (Proctor-Ruschmohr) "Atomic Yellow is canary yellow. It looks as if it should be easy to grow and will be a competitor for Tops and Hoosier Marvel on the show tables." I measured blooms eleven by eight inches, but it has been grown fourteen inches. Bush height is medium and the stem is good" (Roberts). On Eastern and Midwestern Honor Rolls.

Prices net-Plant \$7.50. Three for \$20.00

AUTUMN BLAZE I.D. (Herst-Pennypack) "This variety is a fiery red early in the season; later, it is red centered with shades of gold towards the ends of the petals. It scored 86 at an A.D.S. trial ground and has two awards as the largest and most nearly perfect bloom in the show as well as an Achievement Medal at the 1947 Burholm-Philadelphia show. Flowers range up to twelve inches and are of great depth." (Eddy). On Midwestern and Western Honor Rolls.

Plant \$5.00

BIG BEN F.D. (Jemars) "Big Ben is lavender and looks like an improved Croydon Acme. Croyden Acme and Commando are the winners in this class this year. The bush height of Big Ben is medium, and I have measured blooms up to twelve inches by eight inches deep on it." (Roberts) On Midwestern Honor Roll.

Price net-Plant \$5.00

BUCCANEER S.C. (Sarett-Ruschmohr) "Early in the season this variety is bright with shades of red and gold; later the blooms are orange and gold. It has high cone centers and is altogether a beautiful flower." (Eddy) Size about nine inches. On Midwestern and Western Honor Rolls.

Prices net-Plant \$7.50, Three for \$20.00

CINDERELLA St.C (Sarett-Ruschmohr) "This is in the color class with Mrs. E. J. and Sheik (Holland). It has a center of white extending one third to one half the length of the petals; the remainder is a beautiful Tyrian rose, lightly tipped white. It is about eight inches and an exquisite color combination." (Eddy). On all three Honor Rolls.

Prices net-Plant \$5.00, Three for \$12.50

GYPSY GIRL F.D. (Parrella) "Varigated, rosaline pink flecked and spotted dahlia purple. This variety won the FLOWER GROWER silver trophy at the New York show and a silver medal certificate in it's class. Excellent keeper. Not large, 4½ by 2½ inches; stems 10 to 12 inches." (Dudley) On Eastern Honor Roll.

Price net-Plant \$3.75

MAGNIFICENT SC (Crystal) "A blend of light orange-yellow and orange-chrome, the general effect being golden orange. Blooms are 11 to 12 inches by 6 to 7 inches. It grows in water and keeps well. Shaded and well fed, it can be grown very big. Bush height $5\frac{1}{2}$ feet, stems 10 to 12 inches." (Dudley) On all three Honor Rolls.

Price net-Plant \$5.00

OAKLEIGH CHAMPION InC (Phillips-Oakleigh) "Oakleigh Champion may actually be a large type, as it has been grown II1/2 by 61/2 inches. I am putting it in the medium class for the reason that the flowers I have grown were about 8 inches in diameter. I measured one at the time of writing and it was 73/4 by 5 inches. At the trial grounds at East Lansing and Rutgers they were about this size also. The flowers are incurved and mostly top facing. The color is a blend of burnt orange and soft pink with lemon shadings at the base. The petals are lacinated and twisted. Bush height is medium." (Roberts) On all three Honor Rolls.

Prices net-Plant \$5.00, Three for \$12.50

PURPLE KNIGHT SC (Lasch) "True purple toned Roods violet; general effect soft purple. There are only two varieties, Cardinal Von Rossum and Rebellion, both generally forgotten, in this type and color which this variety has to beat. Does not fade. Bush 4 feet; flowers at 45 degrees and deep; 71/2 by 6 inches." (Dudley) On Eastern Honor Roll.

Plant \$5.00

VALLEY QUEEN InC (Robens) "Valley Queen will probably be classed as a red incurved dahlia. The color is red with shades of brown, mahogany and some tan. Nancy Ann Mitchell and Ballay Rouge were the winners in this class this year. I have had blooms II by 7 inches and I think it can be grown larger. It's a free bloomer of medium bush height." (Roberts) On all three Honor Rolls.

Plant \$7.50

VICTORY ECLIPSE ID (Wolfe) This is an early and consistent bloomer which fully merits the high rating (86) it received in 1946 at East Lansing Trial Grounds. It's a shrimp pink, turning peach pink as the bloom developes; the base of the petals and the reverse are canary yellow. A beautiful velvety sheen overlays the flower giving it an artificial appearance, especially when the petals curve back to the stem. It's in the nine inch class and one of the top dahlias of the year." (Eddy) On all three Honor Rolls.

Plant \$7.50

Small Types

ESTELLE M.StC. (Eldridge-Dahliadel) "Liseran purple, general effect lavender, with only Betsy T as competition. Size 31/4 by 11/2 inches; stems 5 to 6 inches; flowers held at 45 degrees and to the side; profuse bloomer." (Dudley) On Eastern Honor Roll."

Plant \$2.50

NORMA JEAN M. StC. (Shepard) ''Geranium pink flushed buff-yellow at center. Petals finely revolute and straight. Size $3\frac{3}{4}$ by $2\frac{1}{2}$ but grows larger if heavily fertilized; stems 12 to 15 inches; bush 5 feet. Good substance; profuse.'' (Dudley) On Eastern Honor Roll.

Price net-Plant \$2.50

How To Handle Cut Flowers So They Will Keep

The life of dahlia blooms after they are cut may be very much prolonged by a few simple precautions taken at the time of cutting.

First of all, cut only FULLY MATURED blooms. Flowers with a withered petal or two on the back will keep longer, under similar conditions, than young blooms. If desired, the withered petals may be picked, or cut off. Cut a longer stem than will be necessary in the vase or container, for which the flowers are wanted.

Cut the flowers early in the morning before they start to wilt, or in the evening after they have revived from the effects of the sun and winds of the day. Make the cut with a sharp knife so that the microscopic tubes in the stem, which supply water to the flower head, are not crushed.

Flowers should be cut at least eight hours before it is planned to use them. As soon after cutting as possible, the stems should be placed in deep cool water in a cool, draughtless and dark part of the basement. When putting the flowers in water in the basement, it is to considerable advantage, to trim off an inch or two of the stem under water. This cuts off the portion of the stem into which air may have entered the microscopic tubes and choked off the supply of water passing up to the flower head. When the supply of water fails, of course the flowers wilt.

After the period of "hardening" or "finishing" in the basement, the flowers may be used for their intended purpose. In placing them in their permanent containers it is well to again trim off a small portion of the stem under water. In fact, this should be done each time the stem is out of water for more than a moment. Use only CLEAN water and CLEAN containers; factors which are important but often overlooked. Thereafter change the water once a day and trim off the stems. Set the containers out of direct sunlight and draughts. Follow the foregoing suggestions and you will find the dahlia a long-lasting flower.

General List of World's Best Dahlias

VARIETIES MARKED

Varieties marked with asterisk (*) are of foreign origination.

HEIGHTS

Unless otherwise mentioned in the description of the variety, the plants are of medium height.

SIZE

Size of blooms as given at the end of the description of each variety is by no means the maximum. Many of those listed as ten inch blooms have been grown twelve to thirteen inches in diameter. Size is indicated thusly: 10X6, which indicates a ten inch diameter and a depth of six inches.

*ADOLPH MAYER A-ID or SC-R. This excellent variety from Holland comes nearer to being black than any dahlia in this list. The deep garnet red flowers are of good size; the petals have a velvety appearance and it keeps well when cut. Stems are ideal. A strong, freely branching plant, with dark green foliage. Abundant flowering habits. It is also a fine root maker. Size 9x3.

Root \$1.00, Plant .50

AGLOW A-ID-BI (Dahliadel) Warm amber yellow, heavily suffused scarlet on the center area of each petal, and with a golden sheen over all. Fine open grower producing good blooms on long, strong, stems. Size 10x4.

Root \$3.00, Plant \$1.50

ALCAZAR A-SC-R (Ballay) A nicely formed flower of good size. The color is an unusual fuchsia red with a trace of cerise. Habit of growth is excellent. Size 9x4.

Root \$5.00, Plant \$2.00

ALICE MAY

*ALICE MAY A-ID-W. This one from Australia might well be described as a white Lord of Autumn. The blooms are large and of great depth. Stems, foliage, and substance are excellent. The low growing plants produce many fine exhibition blooms. We consider it the finest of all the large "whites." A very consistent winner at leading shows. Size 9x5.

Root \$2.00, Plant \$1.00

ALL AMERICAN A-SC-BI (Salem) A very large flower of mulberry rose suffused salmon and with wax yellow at the base of petals. Plants are medium in height, very vigorous and insect resistant. Blooms are held almost on top of strong, straight stems. A very free bloomer. On the show tables it is almost in a class by itself, winning innumerable prizes wherever shown. Size 10x4.

Plant .75

- AMERICAN PURITY A-SC-W (American Dahlia Farms) One of the largest white semi cactus varieties. It is especially good late in the season, altho it isn't a particularly late bloomer. It has more depth than any white in its class. Size 9x5.
 - Root \$1.00, Pot Root .75, Plant .50
- ANGELUS A-IC-BI (Parenica) A big, showy cactus of brilliant red heavily suffused gold. Early and prolific. Size 10x4.

 Root \$1.50, Plant .75
- *AXFORD TRIUMPH A-ID-Or. A large Australian variety which is becoming very popular with our exhibition growers. The general color effect is tan. Plants are robust with good foliage. Good stems. Size 11x4.
 - Root \$1.50, Pot Root \$1.00, Plant .75
- BALLAY ROUGE A-IC-R (Ballay) Of brightest red and having an unusual formation. Petals curl and twist in an artistic manner. Blooms are larger than commonly found in this type. Size 8x4.

 Root \$3.00, Plant \$1.50
- *BALLEGO'S SURPRISE A-SC-W. A real top-notcher best described as a white Frau O. Bracht. Plants, however, have more vigor than the latter variety. A fine dahlia in the garden as well as one of the best exhibition and commercial varieties. Size 8x4.

 Root \$1.50, Pot Root \$1.00, Plant .75
- **BATAAN B-SC-BI** (Retzler) A fairly large flower; red lightly tipped gold. This variety seems to have performed well this past season as it was more in evidence at the shows, which we attended, than any other 1943 introduction. Size 9x3.
 - Root \$1.00, Pot Root .75, Plant .50
- BEAU BRILLIANT A-ID-R (Ballay) Fairly large blooms of cherry red. Very profuse in it's blooming habits and a reliable performer in the garden.
 - Root \$1.50, Plant .75
- BEDFORD BEAUTY B-IC-L (Parenica) A delicately formed flower of equally delicate coloring. The color is pinkish lavender shading lighter toward the center. Petals are tightly rolled from tip to base. A very profuse bloomer. Size 6x21/2.
 - Root \$2.00, Pot Root \$1.35, Plant \$1.00
- BELVEDERE A-ID-Pi (Ballay) Large blooms of silvery pink. Formation and substance is all that could be desired. A strong grower that is very attractive in the garden and a potential winner on the show table. Size 10x4. Root \$2.00, Plant \$1.00
- *BERGER'S MASTERSTROKE B-IC-Pi. A nicely formed flower with tightly rolled petals. Chamois-pink color. This variety comes to us from Europe where it has established itself as one of the best of it's type. Slender stems hold the flowers well above the plant. Size 7x3.

 Plant \$1.50
- BESS SMITH A-ID-W (Anderson) A very good white informal with a slightly creamy center. Fine stems. Blooms have very good substance and do not burn readily in hot weather. Good habits of growth. Size 9x3.
 - Root \$1.50, Pot Root \$1.00, Plant .75
- **BETTE DAVIS** A-SC-L (Cordes) A standout in its color and class as an exhibition variety. The large, well formed flowers are rosy lavender to deep lavender. Excellent stems. Size $9x3^{1/2}$.

 Plant \$1.00
- *BILL'S GOLD A-ID-Or. One of the finest "gold" dahlias to date. Very large blooms. Stems straight and strong. Plants medium in height. Winner of many championships in its native Australia and a consistent winner here. Size 9x31/2.
 - Root \$1.50, Plant .75
- BILL JACK A-SC-W (Frank's). This white semi cactus was one of the best of the 1947 introductions. Plants are tall, stems long and strong, flowers are well formed with excellent depth and good substance. An ideal exhibition variety. Size 9x5.

 Root \$10.00, Plant \$3.50

*BILL'S SPLENDOR A-ID-Pi Large blooms of luminous rose pink with good formation.

An early bloomer and good grower. This is one of the best of many Australian varieties introduced into this country. Size 10x4.

Root \$2.00, Plant \$1.00



BLACK MONARCH



River) A very dark oxblood red, aptly described by a garden visitor as "the big misty black dahlia." A strong grower and free bloomer. Stems are long and strong holding the flower well above the plant. Blooms have a lot of substance and keep well after cutting. Size 11x5.

Root \$3.00, Plant \$1.50

be classed A-ID-L. Blooms are quite large with good depth. It is a very free bloomer. The color is described as French violet. One of the best of the 1945 introductions. Size 9x4.

Root \$3.00, Plant \$1.50

california IDOL A-ID-Y (Ballay) A giant, clear yellow that can win in any class of competition. We consider it the easiest of the big exhibition yellows to grow. The flowers have great depth and are set facing, on exceptionally long stems. Size 10x6.

Root \$1.00, Plant .50

CALIFORNIA PAGEANT A-ID-Bl. (Ballay)
Bright gold with bronze shadings.
Flowers are large, having been grown thirteen inches in diameter at a trial ground of the American Dahlia Society in 1946. Stems are good, holding the flower facing the side.

Plant \$2.50

CALIFORNIA IDOL

CARL G. DAHL A-ID-BI (Scott) A very large, well formed flower of an uncommon shading of emberglow with a golden sheen overall and sweetbriar reverse. Excellent stems hold the flowers facing the side. This is decidedly one for those who like their dahlias big. Size 12x6.

Root \$1.50, Pot Root \$1.00, Plant .75

center until the last. Fine green foliage. Good stems holding the flowers facing the side. Very good substance. Size 10x5.

Plant \$2.50



CHEADLE PARK A-SC-Pu (Eccleston-Rocky

River) A welcome addition to the weak purple semi cactus class. The color is a very dark reddish purple with lighter purple on the reverse. Blooms are well formed, with good depth. Plants are upright growers with strong laterals. Size 9x4.

Root \$3.00, Plant \$1.50

CHEER B-ID-Var (Dahliadel) A bright lemon yellow splashed and striped bright red. An interesting cut-flower variety. Size 8x3¹/₂. Plant \$2.00

CHEADLE PARK

CHEER LEADER B-ID-L or Pi (Richardson) Outstanding because of its free flowering trait under all conditions. Blooms are fairly large and have very good substance; keeping well on the plant and after cutting. Stems are ideal. The color is rose-pink. Size 8x3¹/₂.

Root \$1.00, Pot Root .75, Plant .50

CHEROKEE BRAVE A-ID-R (Ricks) We consider this to be the best of the large exhibition "reds." The large, deep flowers are an attractive shade of ox-blood red, which holds the color well in hot weather. It blooms quite early and continues throughout the entire season. Excellent stems and foliage. Size IIx5.

Root \$1.50, Plant .75

CHEROKEE ROSE A or B-ID-L (Ricks) This is one of the most consistent producers in our gardens. The flowers are medium to large in size, and of more than average depth. The color varies from lilac pink to a warm rose pink. Plants are tall and freely branching. Flowers keep well, either on the bush or after cutting. Size 8x4.

Root \$1.00, Plant .50



CLARA HOOK

CLARA HOOK StC (Wolbert-Rocky River)
A large straight cactus of golden yellow, lightly suffused peach. Has been grown up to twelve inches in diameter. Flower has excellent substance. Stems are rigid. Plants tall with heavy, glossy, dark green foliage.

CLARA HOOK was the Derrill W. Hart Medal winner for large flowered dahlias in 1946. Also winner of Achievement Medals at Toledo, Ohio, and Louisville, Ky. Certificates of Merit at Cincinnati, Storrs and Baltimore. An outstanding winner in seedling and open-to-all classes since its first year. On all Honor Rolls.

Root \$7.50, Pot Root \$5.00, Plant \$2.50

CLARIAM B-ID-BI (Wolbert) A very pleasing and consistent variety in the garden. Medium sized blooms of light, bronzy buff overlaid begonia rose. Stems are long and rigid holding the bloom well out of the bush. Very early and free bloomer and also a good keeper when cut. Size 7x3.

Root \$1.00, Pot Root .75, Plant .50

CLARIAM BELLE A-ID-Bi (Wolbert-Rocky River) A bi-color without the harshness so often associated with bi-colors. Petals are primrose-yellow, each with about three-quarters of an inch of white at the tip. Color markings are less variable than in most bi-colors. Plants are strong growers with heavy, glossy, dark green foliage. Flowers held facing the side. Size 9x4.

Root \$1.50, Pot Root \$1.00, Plant .75



CLARIAM DAWN



CLARIAM KELTON

 $\stackrel{\wedge}{\sim}$

CLARIAM DAWN A-FD-Or (Wolbert-Rocky River) General effect is orange, which is composed of a blend of cadmium orange, capucine yellow and buff with a glistening effect over all. A much needed variety in its class. Size 91/2x4.

Root \$3.00, Plant \$1.50



CLARIAM KELTON A-ID-BI (Wolbert-Rocky River) Fairly large blooms of flame red blended with yellow and with yellow reverse. Very showy in the garden and a consistent winner at shows. Plants are tall, open growers, producing an abundance of flowers on long, strong stems. Several have written that this was one of the pleasant surprises of the 1945 introductions. Size 9x4.

Root \$2.00, Plant \$1.00

CLASS A-FD-Y (Salem) An excellent variety for exhibition as it is one of the few formals which remain formal at all stages of maturity. The color is a medium shade of yellow. A prolific bloomer on compact plants. Size 10x41/2.

Root \$1.50, Pot Root \$1.00, Plant .75

COL. A. G. RUDD A-ID-R (Geer) Rich carmine with deeper, mahogany red at the center. It is a real factor in the red classes. Strong, tall grower. Size 10x4.

Root \$2.00. Pot Root \$1.50, Plant \$1.00

GOL. LITTLE A-ID-Bl (Ambrose) A very showy, bright scarlet-orange, with twisting petals showing the lighter reverse. A good grower, carrying the flowers well above the fairly tall plant. Good stems. This brilliantly colored dahlia is bound to be popular. Size 10x5. Root \$5.00, Pot Root \$3.50, Plant \$2.00

CORAL CACTUS B-InC-Pi or Bl (Bennett-Beckman-Ruschmohr) A beautiful shade of coral pink, shading to yellow at centers. Very early and profuse bloomer. Open Root \$3.00, Pot Root \$2.00, Plant \$1.00 grower. Size 8x4.



CROWNING GLORY

CROWNING GLORY A-IC-Pi (Salem) One of the real sensations of the 1941 introductions. Exceedingly large; rose pink with cream center. Stems are ideal. Flower formation is very artistic. It was very much in evidence as a blue ribbon winner at all the leading shows of the past seasons. Size 10x5.

Root \$3.00, Plant \$1.50

*CROYDON ACME A-FD-L. One of the largest and deepest flowers of it's color. Almost unbeatable in the formal lavender classes. Plants are strong growers. Excellent stems. Size 10x6.

Root \$2.00, Plant \$1.00

DAHLIAMUM A-ID-Or (Chemar) Among the larger varieties, this is such a strong grower that we recommend it for every beginner's garden. A deep flower of cadmium apricot with a golden sheen. Stems are strong, carrying the flowers on top. Profuse bloomer. A truly fine all-around dahlia. Size 10x5.

Root \$1.50, Pot Root \$1.00, Plant .75

*DARCY SAINSBURY A or B-FD-W. This Australian variety is now the most popular of all white dahlias for exhibition, winning scores of awards throughout the country's leading shows each year. Its pure white color and free flowering habits make it a standout in the garden too. The flowers are fairly large, and have all the qualities of a good dahlia. Size 9x4. Root \$1.00, Pot Root .75, Plant .50

*DAUNTLESS A-SC-Bl. This worthy Australian variety is an attractive deep gold lightly suffused bronze with the outer petals deepening to rust. Numerous petals give the flower great depth. Stems are very good. Plant vigorous. Size 10x6.

Root \$3.00. Plant \$1.50

D-DAY B-FD-Pi (Hendricks) A medium sized variety of true pink. A fine florists' flower and an excellent candidate for "best bloom" classes at shows. The flowers are well formed, with very good substance, and the steams are ideal. Plants are tall, open growers and productive. Size $7x3\frac{1}{2}$. Root \$2.00, Pot Root \$1.50, Plant \$1.00

DEAN SHURTLEFF A-ID-R (Taylor) Tall sturdy grower carrying the large crimson flowers well above the dark, heavy foliage. Size $10^{1/2}x5$. Plant \$1.00

DEEP VELVET FD (Baker-Ruschmohr) A formal decorative of dark carmine with an overlay of oxblood red. Petals have a deep velvety appearance. The all-around good qualities of this dahlia won for it, the Derrill W. Hart Medal for "B" size dahlias in 1946 although it can be grown to "A" size. Strong grower. Size 8x4.

Root \$7.50. Plant \$2.50

*DELTA A-FD-L. Another fine dahlia from Australia. The blooms are large and massive, with exhibition perfection. The color is a very pleasing magenta-rose. The plant is a rugged grower, with very distinctive, dark green, glossy foliage. Size 9x5.

Root \$1.00, Pot Root .75, Plant .50

DIXIE'S WINE DOT A-ID-Var (Hendricks) A variegated white, splashed with wine color. Blooms can be grown to twelve inches in diameter with corresponding depth. Winner of the American Home Achievement Medal at Chicago, Toledo, and New Baltimore in 1942. A strong grower. Size 11x5.

Root \$1.50, Plant .75

DOROTHY GEER B-FD-Pi (Geer) This was one of the most attractive and pleasing dahlias in our gardens during the past season. The flowers are medium sized; of light rose pink, shading lighter towards the tips. Blooms are uniformly of exhibition quality. This one should be a factor in classes calling for the most perfect bloom in the show. Bushes are tall and well formed. Size 7x3½.

Root \$1.00, Plant .50

DOROTHY LAMOUR A-StC or SC-Or (Ballay) One of the few real golden dahlias. Fairly large blooms of excellent formation. Long, strong, stems. The bushes are tall with foliage more typical of a decorative variety than of a cactus. One of our favorites of the 1941 introductions.

Root \$2.00, Plant \$1.00

and an exceptionally good variety for exhibition. Color varies from pink to lavender. Flowers are very full petaled and the petals roll well back forming a ball-shaped bloom. Stems are excellent and the plant is a good grower. A very free bloomer. Size 8x4.

Root \$1.50, Pot Root \$1.00, Plant .75



DULCINEA

*DULCINEA B-StC-R. A fine all-around dahlia of rare beauty of form and color. The medium sized flowers are an attractive cardinal red and carried in great profusion on the best of stems. A most consistent winner at shows, a fine garden sort and excellent for the cut-flower trade. We can recommend this highly for any garden. Size 7x4.

Root \$1.50, Pot Root \$1.00, Plant .75

EDGAR A. GUEST A or B-SC or ID-Y (Koenig) A well formed flower of sulphur yellow. Medium sized flowers are carried well above the bushes on good stems. Early and profuse. Size 8x41/2.

Root \$1.50, Plant .75

purple cactus of medium size. The well formed flowers keep well when cut and are of exhibition quality. Size 7x3.

Root \$1.00, Plant .50

ELODIE K. SC (Lakeside) Prolific bloomer on long stems with flowers facing the side. An excellent florists' flower of pink, lavender and yellow. Petals are lacinated, and the flower has an interesting formation. 1947 introduction. Size 5x3.

Root \$7.50, Plant \$2.50.

EL RUBIO A-ID-R (Redfern) Very large blooms of rich ruby red. Flowers keep for a long time on the bush and after cutting. Plants are robust growers. Size 12x5½.

Plant \$1.00

performers of the past season in our fields. Large blooms up to twelve inches with heavy, waxy, pure white petals. While some stems are a trifle short, most are of suitable length for exhibition purposes. Plants are strong growers with heavy, glossy foliage. Size 10x41/2.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

ESSIE SMITH A-SC-Pi. or L (Smith) One of the largest of recent introduction. Winner of several "largest bloom" awards this past season. Color varies from lavender-pink to lavender. Flowers have great depth giving them a massive appearance. A good grower. Size 11x6.

Root \$3.00, Plant \$1.50

*EXTOILE DE NAGLES C A fine European variety with plenty of substance and of excellent formation. Petals are tightly rolled and the flower is well formed. Color is crimson-red. Size 8x31/2. Root \$2.00, Plant \$1.00

EVENTIDE A or B-ID-Pu (Bissell) One of the finest of the 1940 introductions. The flowers are a deep violet-purple, fairly large, and of distinctive beauty. Each petal is notched, adding very much to the appearance of "fullness" created by the rolling of the back petals to the stem. A free, early bloomer that will win its share of prizes. Plants are broad, spreading, and rugged. Foliage is dark and leathery. Size 9x4½.

FAITHFUL A-SC-W (Dahliadel) A fairly large, wide petaled, semi cactus white that is easy to grow. Plants are robust with glossy green foliage and fairly tall. Well proportioned stems. Size 9x41/2. Root \$2.00, Pot Root \$1.50, Plant \$1.00

FARNCOT B-InC-Bi or BI. An old-timer, which is still one of the best in the bi-color cactus classes. The color is a deep purple, with the outer one-third of the petals tipped pure white. Like most bi-colors it will produce some solid colored flowers. Size 6x3.

Pot Root \$1.00, Plant .75



FIGARO

*FIGARO A-SC-Var. Reputed to be a seedling of Satan, with many of the good characteristics of the parent, and none of the faults. The color is a golden-yellow, flecked and streaked red. The flowers are very large, and most striking in appearance. Stems and plant growth are excellent. A superb exhibition flower which is outstanding in the bi-color classes. Size 11x5.

Plant .75

Ruschmohr) One of the largest formal decoratives. The color is two or three shades of pink blended with maize yellow. Long strong stems. Good grower. This 1946 introduction was at it's best this past season, winning innumerable prizes at shows all over the country. Size 11x5.

Root \$5.00, Plant \$2.00

FORMOSA (Salem) This was one of our personal favorites of the past season. The blooms are fairly large, and the color is a very clean, attractive amaranth pink shading to Tyrian pink. It is a bright flower on strong stems, and the bushes are rugged. Not yet classified by A.D.S. but it would seem to be A-FD-Pi. Size 9x4.

Plant \$1.00

*FRAU IDA MANSFIELD A or B-StC-Y. A very attractive, pale lemon yellow that is always a favorite in our gardens. The flower is very deep and large for this type. The tips of the petals are cleft giving the flower added character and the appearance of having many more petals than there actually are. Early. Tall. Size 8x4.

Root \$1.50, Plant .75

*FRAU O. BRACHT A or B-SC or IC-Y. This dahlia should be in every garden. We consider it one of the finest on the market. The perfectly formed flowers are a clear, light, primrose, yellow of good size. A fine dahlia for the exhibitor or casual grower. Size 8x4.

Root \$1.00, Pot Root .75, Plant .50



FREDA GEORGE

*FREDA GEORGE A or B-ID-BI. A large Australian variety which attained instant popularity in this country. Artistically formed and delicately colored, and with all the characteristics of a good exhibition variety, its popularity is justified. The color is a soft, creamy pink, overlaid helio, darker toward the tips and shading to a deep cream at the base. Early and prolific. Size 91/2x5.

Plant .75

FRIEDA GAYLORD A-ID-BI (Ballay) A magnificent dahlia of remarkable size. The color is rosy pink lightly shaded gold. Sturdy plants produce the large blooms on nice strong stems which hold the flower well above the plant. Size 12x7.

Plant \$2.50

GAYLORD BALLAY A-ID-W (Ballay) This is one of the largest of the informal "whites." Blooms exceeding twelve inches in diameter are not uncommon. Long, strong stems carry the blooms well above the tall plants. Although not an early bloomer, it should be "topped" when small to encourage lateral development. Size 10x5.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

GEN. JOHN J. PERSHING A-SC-Bl or Var (Ward-Ruschmohr) A sport of Virginia Rute with all the characteristics of that great variety. The general color effect is tan. Petals are striped and splashed violet. Tall grower and good bloomer. Size 11x6.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

GINGER ROGERS A-ID-Y (Ruschmohr) A very large, deep yellow of a most attractive shade. Blooms have very great depth, being nearly "ball-shaped" when mature. A free bloomer. Plants are vigorous with good foliage. We believe this is one which will be with us for some years. Size 9½x6. Root \$2.00, Plant \$1.00

GLAMOUR A-ID-Pu (Salem) A notable addition to the really large dahlias. Everything about the flower suggests size and vigor. It is a variety which anyone seems to be able to grow well under almost all conditions. The very large flowers are an unusual shade of light purple with each petal edged amaranth pink. The petals roll well back giving the flower extreme depth. A consistent winner at the best shows in both specimen bloom and "largest bloom in the show" classes. Size 12x7.

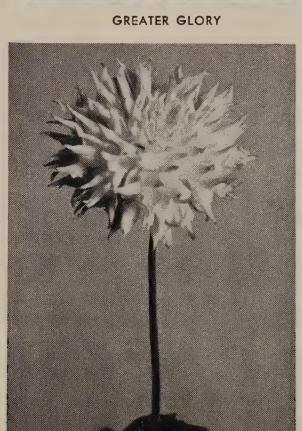
Root \$1.50, Plant .75.

GOLDEN STANDARD A-IC-Or (Downs) An old favorite which is still one of the best. Fairly large blooms of an attractive light orange color. Stems and substance are excellent. Size 9x4.

Plant .75

*GOULBURN A-IC-BI. A very large Australian cactus which fills a real need on the show table. Flowers have a deep lemon base blending to reddish apricot at the tips of the petals. Very outstanding. Size 10x41/2. Root \$3.00, Plant \$1.50





HIAWATHA

GREATER GLORY A-SC-Pi or Bl (Salem)

A very large semi cactus of rose pink, shading lighter. Excellent formation and a consistent winner at strong shows. Plants are tall, strong growers, producing an abundance of flowers thruout a long season. One of the best of it's type. Size-9/2x4/2.

Root \$1.50, Plant .75

HALLEY'S COMET B-StC-Bl (Retzer) A brightly colored flower of deep rose-red blended chrome with yellow at the base of the petals. Strong, fairly tall grower. Size 7x4.

Root \$1.50, Pot Root \$1.00, Plant .75



River) Clear buttercup yellow on very long stems. Petals are pointed and twisting. Good substance, the flower holding it's form nicely on the plant or after cutting. Plants are tall and are good growers. Does best if not overfed. Size 9x5.

Root \$5.00, Plant \$2.00

HILLSIDE GOLD B-StC-Y (Bissell) A very free blooming variety of excellent quality. The color is a bright golden yellow with an apricot glow. Plants slightly below average in height. Size 8x4.

Root \$1.00, Plant .50

HOOSIER MARVEL A-SC or ID-Y (Wolfe)
One of the very largest. The color is
about the same shade of yellow as

Lord of Autumn. Blooms have great depth. Plants are strong growers and free branching. Should be planted early for early shows. Size 11x6.

Root \$3.00, Plant \$1.50

INDIAN GIANT A-ID-Or (Emmons) The general appearance is tan or apricot. Blooms are large, with all the good qualities of an exhibition variety. Plants are bushy and of slightly less than medium height. It is a welcome addition to the autumn informal classes. Size 11x4/2.

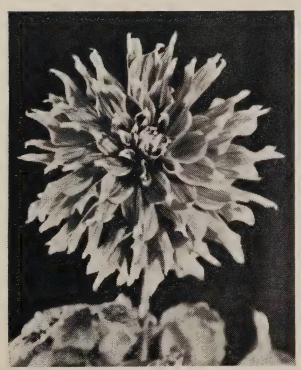
Root \$1.50, Pot Root \$1.00, Plant .75

INDIAN SUMMER A-SC-Or (Goetzer) Nicely formed flowers of medium size. The color is golden yellow with soft orange suffusion. Tall plants, with dark green foliage.

Root \$1.00, Pot Root .75, Plant .50



IVORY PRINCESS



JANE LAUSCHE

Ruschmohr) Extremely large, well formed flower of an unusual ivory shade.
Long, stiff stems. Tall grower. Winner of many awards including Achievement Medal at Kearney, N. J. Will be hard to beat in its color and type. Size 11x7.

Plant \$1.00

JAMES ROSS A-ID-R (Dorff) A striking large flower of velvety, dark reddish mahogany which does not fade. The naturally large flowers are held well above the rugged plants on good stems. This 1944 introduction performed well throughout our unfavorable season. Size 10x5.

Root \$3.00, Plant \$1.50

JANE LAUSCHE A-SC-Bi (Rocky River) A new color combination in a large dahlia. Rosy mauve with about one-third of each petal tipped white. Just about all the superlatives in the dictionary have been used to describe it. Winner of many "largest bloom" and "most perfect bloom" awards. The plants are open, fast growers and produce blooms early, and in profusion until frost. A standout in the semicactus bi-color class. Size 10x6.

Root \$5.00, Plant \$2.00

JEAN KERR Ba-W or B-FD-W (Burpee) A medium sized white which is unsurpassed as a cut-flower of the formal type. Also very useful for exhibition. A very free bloomer. Size 5x3.

Root \$1.00. Plant .75

*JEAN PATURET A-StC-Y. One of the largest of the straight cactus sorts. The color is deep yellow of one tone. Size 8x4. Root \$1.50, Plant .75

*JEAN TRIMBEE A-SC-Pu. A Canadian introduction of a few years ago which yearly piles up one of the finest show records of any dahlia. Large flowers of a rich violet shade. Tall grower. It is one of the first dahlias in the garden to bloom and it is a free bloomer thruout the season. Size 9x5.

Root \$1.50, Plant .75

JERSEY'S BEAUTY B-FD-Pi (Waite) The most universally grown dahlia of the present. Eosine pink, of medium size. Our stock of this is exceptionally fine. Size 7x4.

Root \$1.00, Plant .50

JERSEY'S DAINTY B-StC-W (Waite) Still a top-notcher after many years. Winner of many blue ribbons the past season as well as numerous "specials." A really good white cactus for shows. Size 7x4.

Root \$1.00, Plant .50

JOAN FERENZ A-ID-Y or BI (Rindfleisch-Rushmohr) Large flowers of pleasing formation. General color effect is deep yellow-gold, although there is a flush of spinel pink in outer petals. An early bloomer and consistent performer here in our gardens.

Root \$3.00, Plant \$1.50

JOHN ADAM KERNOCHAN B-FD-Bi (Fioretti-Parrella) A medium sized bi-color which is very nearly ball-shaped. Color is garnet red with each petal tipped white. Stems are long. Plant is a tall, vigorous grower. Size 7x4.

Root \$1.00, Plant .50

JOHN L. STEVENS B or M-StC-Bi (Premier) A red and white bi-color very similar to the old favorite Miss Belgium in formation and habits of growth. Blooms are five to six inches in diameter and very well formed for exhibition. Grown as a miniature and not disbudded, it presents a very striking appearance in the garden. Size 5x3. Root \$1.00, Pot Root .75, Plant .50

*KELVIN A-ID-Pi. One of the greatest dahlias to come out of Australia. Blooms are large and massive, held facing up on strong stems. The color is buff heavily suffused carmine rose, giving a general color effect of peach pink. Strong plants with exceptionally coarse, broad foliage. Size $10^{1}/2 \times 6$.

Plant \$1.50

KENTUCKY SPORTSMAN A-ID-Bi (White) An unusual color combination of three distinct colors. Lemon yellow at the center, outer petals are golden amber tipped white, and with an old rose reverse. Fairly large flowers of good exhibition qualities. Size 91/2x4.

Root \$1.50, Plant .75

KIRSTEN FLAGSTAD A-ID or FD-Or (Brown-Rocky River) Outstanding in the garden, producing large, fine blooms very early, and continuously throughout the season. Plants are tall with flowers held well above heavy. glossy green foliage. The color is rich gold suffused lightly with apricot. Winner of several "specials" at shows this past season. Size $9\frac{1}{2}x4\frac{1}{2}$. Root \$3.00, Pot Root \$2.25, Plant \$1.50

> *KOKI A-SC-BI. A blend of soft carmine and buff, lightly tipped buff. Blooms are fairly large and of good exhibition quality. Good stems. Size 9x5.



KIRSTEN FLAGSTAD

Root \$1.00, Plant .50

LADY IN RED B-SC-R (Hendricks) A very showy flower of bright velvety red. Flowers are medium in size. Plants tall. Size 7x4.

Root \$1.00, Pot Root .75, Plant .50

*LAETARE B-SC-Bl An attractive, medium sized flower of orange-red edged chrome yellow. A great favorite with our visitors and very useful as a florist's flower. Size 7x4.

Root \$1.00, Plant .50

L. C. K. B-StC-BI (Koenig) Medium sized, neatly formed flowers of bright apricot yellow suffused rose on the outer tips of the petals. Slightly below medium height in plant growth. A fine producer. Very useful as a cut-flower. Size 6x3.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

LEAH PEARL B-FD-BI (Keiser) A medium sized flower of a pleasing shade of light pink and cream. Flowers are globular in form, being regarded by many as a ball dahlia. A fine cut flower. Size 7x4.

Root \$1.00, Plant .50

LIDICE A-ID-Y (Kemp) A strong, vigorous grower producing an abundance of fine blooms. The color is a delicate ivory-cream deepening to yellow at the centers. Size 9x41/2.

Root \$1.50, Pot Root \$1.00, Plant .75

LINK'S BLUE TRIUMPH A-FD-L (Link-Premier) An improved Blue River; slightly larger and with better foliage. Good stiff stems. A consistent winner in its class. Size 9x4.

Root \$1.00, Plant .50

LINK'S SENSATION A-SC or ID-BI (Link-Premier) A large, deep flower of a mixture of buff and scarlet, blending to appear orange. Reverse is bittersweet-orange

LOIS WALCHER

which shows on the face of the flower as the petals twist. Good, strong stems. Free bloomer. Foliage is leathery and insect resistant. We consider this one of the best of the 1944 introductions. Size $91/2 \times 5$.

Root \$2.00, Plant \$1.00

LOIS WALCHER B-FD-Bi (Walcher) This sensational winner as a seedling, continued its fine record during the past season. We regard this as one of the finest true bi-colors on the market. Flowers are of medium size, true pansy purple, evenly tipped a clear white. We recommend this one be given good cultural methods for best results. Plants are low to medium in height, with dark green foliage. Stems are long and unbending. Size 7x4.

Root \$1.50, Pot Root \$1.00, Plant .75

MIDWEST DAHLIA SHOW

This great annual get-together of leading dahlia enthusiasts from all parts of the country will be held in Milwaukee, Wisc. on Sept. 11th and 12th. This is in the center of one of the country's real hotbeds of exhibition dahlia growers. Distance prevents our exhibiting there but we will be on hand to visit with old friends and meet new ones.



LORD OF AUTUMN

of greatest of the great. This big, artistically formed beauty is one of the greatest winners at all shows. It has many "largest bloom in the show" awards. The clear yellow flowers have exceptional depth. Although it is regarded as a bit temperamental in its growing habits, we believe that everyone interested in the largest ones should try it. Our stock has produced many winners. Size 10x6.

Plant .75

LOVELINESS B-StC-Bl (Parenica) A nicely formed cactus with good substance. The color is rosy pink with salmon, blending into sulphur yellow at the base. Good habits of growth and good stems. Size 6x3.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

LUCKY B-StC or SC-R (Schutte) A bright red cactus. Ideal for cut-flower work or exhibition. Blooms are held facing on stiff wiry stems. Starts blooming very early and continues to produce freely throughout the season. Size 7x4.

Root \$2.00, Plant \$1.00

LUZON B-StC-L (Retzer) Clear liseran purple giving the general effect of lavender, a color which is needed in our shows. A strong grower. Size 7x4.

Root \$2.00. Plant \$1.00

LYNN FONTANNE A-SC or ID-R (Lee-Parrella) One of the very largest. A frequent winner of 'largest bloom' awards. The color is spectrum red with shades of carmine towards the tips and with chrome yellow petaloids throughout the flower. A strong grower and a good keeper when cut. Blooms face the side on strong stems. This is a dahlia which is still growing in popularity with those who like the big ones. Size IIx7.

Root \$1.50, Pot Root \$1.00, Plant .75

*MAFFIE A-SC-R. A very highly regarded dahlia of recent introduction. The color is an intense, bright red. Nearly always a contender for largest bloom in the show honors. Tall, open grower. Size 11x6.

Root \$1.50, Plant .75

AMERICAN DAHLIA SOCIETY SHOW

The thirty fourth annual show of the American Dahlia Society will be held in New York at the Hotel Pennsylvania on Sept. 21st and 22nd. Like the Midwest show, this show attracts visitors and exhibitors from a wide section of the country, and many of the finest new varieties are on exhibit. As in the past several years, we expect to visit this show again this year.



MAJOR VEIRS

MAJOR VEIRS FD (Veirs-Rocky River) A formal decorative of buff yellow with peach suffusion on outer petals. Petals roll back forming a deep flower. A very rugged grower and a dahlia that can stand forcing. Foliage is heavy and broad. Flowers average nine to ten inches but can be grown to twelve.

MAJOR VEIRS was the winner of Achievement Medals at Cleveland and East Liverpool. Certificate of Merit at Baltimore and on Robert's Midwestern Honor Roll in 1946.

Root \$7.50, Plant \$2.50

*MANDELAY A-SC-Y A very 'clean' flower of a one-tone clear, pleasing yellow. Tall grower. Size 9x4. Root \$2.00, Pot Root \$1.00, Plant \$1.00



MARGRACE

MARGRACE A-ID-R (Bissell) A really striking variety of brilliant scarlet, tipped gold, and with gold at the base of the petals. Large flowers, long stems and tall bushes, of open growth. A consistent winner. Size 91/2 x 5.

Plant .75

MARY LYNN DUDLEY A-SC-R (Dudley) A very large semi-cactus in the dark red shades. True carmine with outer petals of a rich, velvety texture and the centers almost black. A nicely formed flower on long stems. Size 9x4.

Root \$1.50, Pot Root \$1.00, Plant .75

MARY NOBLE A-FD-L One of the best of it's color and type. Phlox pink to bright mauve. Blooms have size, depth and good quality. Plants vigorous. Size 10x6.

Roots \$3.00, Plant \$1.50

MARY TAYLOR B-StC or IC-BI (Taylor) A fairly large cactus of grenadine pink flushed cream and with a yellow center. A good grower and root-maker. Size 8x4.

Root \$1.00, Pot Root .75, Plant .50

MICHAEL BLACK A-ID-Pu (Phillips-Oakleigh) A purple of about the same shade of reddish purple as our great 1946 introduction, Mrs. Hester A. Pape. Blooms have good depth, and are held well out of the strong plants, on good stems. Size 9x5.

Root \$7.50, Plant \$2.50

MICHIGAN WHITE B-ID or SC-W (Keiser) One of the very best of the white cutflower dahlias. The well formed flowers seem to "pop" out over night on long, strong stems. Substance of the flower is excellent, the flower keeping well when cut. Size 7x4.

Root \$1.50, Plant .75

MILADY (Dozier) An informal decorative of fair size. Color is magenta rose. Excellent, long stems hold the deep flowers well above the very robust plants. Good for cutting or exhibition. Will probably be classed as a B size flower. Size 8x4.

Root \$1.50, Pot Root \$1.00, Plant .75

MISS BAINBRIDGE A or B-IC-Pi (Robens) A pink cactus with lacinated petals lightly tipped pinard yellow. Flowers are fairly large with excellent stems. This 1944 introduction accounted for more ribbons than any other 1944 introduction at the shows we attended the past season. Size 8x4.

Root \$1.50, Pot Root \$1.00, Plant .75

MISS FLINT LAKE A-SC-Or (Boyle-Beals). A seedling of Stephen Foster with the parents size but slightly lighter in color. Plants are good growers and it is a very good bloomer.

Root \$5.00, Plant \$2.00

MISS LIBERTY A-FD-Bi (Comstock) A lively, bright bi-color of scarlet, tipped white. Blooms are quite uniformly bi-colored. Foliage is broad and dark green. Long cane-like stems hold the flowers facing the side. Size 9x4.

Plant \$3.50

MISS SAN DIEGO A or B-StC-Bl (Comstock) One of the finest and most distinctive of the 1946 introductions. The nicely placed petals are deeply notched giving added character to the blooms. The pleasing color combination of Tyrian pink shading lighter and into sulphur yellow at the base of the petals has made it an immediate favorite. Size 8x4.

Root \$5.00, Pot Root \$3.50, Plant \$2.00



MOTHER KOENIG

*MME C. JUSSIANT B-IC-L A French variety of good size for it's type and one which is much in demand by exhibitors as it is one of the few good lavender cactus. Size 7x4.

Root \$1.50, Pot Root \$1.00, Plant .75

*MOTHER BALLEGO B-IC-R. One of the best recent introductions from Holland. Bright scarlet blooms with tightly rolled tips that twist sidewise, giving the flower a distinctive appearance. Good stems and substance.

Root \$3.00, Plant \$1.50

MOTHER KOENIG A-ID-BI (Koenig) A large shrimp pink blending to yellow at the center. An early and free bloomer, which stands heat well in the field. Size 9x5.

Root \$2.00, Plant \$1.00

*M YNA A-St.-C or SC-Bl. Large, well formed blooms of excellent substance. Centers are yellow blending to a lively rose-pink toward the outer edges of petals. Stems are very good. Plant grows quite tall. A fine exhibition variety. Size 10x41/2.

Root \$2.00, Pot Root \$1.00, Plant \$1.00



MRS. E. J.



MRS. HESTER A. PAPE

MRS. E. J. B-StC-Pi (Rocky River) The record of this bright pink cactus has justified the pride we took in it in naming it in honor of our wife. It is a strong grower producing an abundance of flowers on rigid stems. Petals have exceptionally good substance giving the flower unusual keeping qualities, a characteristic that has endeared it to florists. Cleveland florists prefer it to any dahlia in our fields. Perfection of form has made it a fine exhibition variety, having won "best in show" at several shows.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

MRS. HESTER A. PAPE A-ID-Pu (Pape-Rocky River) Another of our 1946 introductions that scored heavily in many shows thruout the country. It is classed as a purple but the color is one which is usually referred to as red, actually a reddish purple. It is a dahlia anyone can grow and grow well, and it is a dahlia which will stand "forcing." A real delight to the exhibitor. Size 10x5. Root \$5.00, Pot Root \$3.50, Plant \$2.00

MRS. HOWARD C. PHILLIPS A or B-ID-W (Asther) Fairly large flowers of delicate creamy white, nicely formed on good stems. Blooms very early and freely. A robust grower with glossy green foliage. Size 10x5.

Root \$2.00, Plant \$1.00

MRS. MINNIE RING B-IC-RI (Far West)
Long, narrow petals twist and curl to
form a chrysanthemum-shaped flower.
The outer petals are apple-blossom
pink; inner petals a pale yellow. Size
7x4.

Plant \$2.00°

MRS. RICHARD G. ATKINSON A-ID-Y (Comstock) A flower which is very large in diameter. The color is sulphur yellow with a light greenish cast. Tall, strong grower. Size 11x41/2.

Root \$1.50, Plant .75

NANCY ANN MITCHELL B-IC-R (Ruschmohr) A fairly large cactus of excellent form on graceful, long stems. Flowers are a vivid scarlet. The free blooming habits coupled with the striking color make this one a center of focus in the gardens. It is also a very consistent winner on the show table. Size 8x4.

Root \$1.00, Pot Root .75, Plant .50

NORTHERN LIGHTS A-SC to C-W. (Dixie Nurseries) Large, pure white blooms of artistic formation. Petals tightly rolled at the tips and frequently for nearly their full length. The tall plants are rugged growers. Size 10x4.

Root \$10.00, Plant \$3.50

OAKLEIGH MONARCH A-FD-R (Hook) A big, dark red, formal decorative, which has been one of our most consistent performers. Plants are very vigorous, stems are excellent, and a great number of flowers are produced throughout a long season. We consider it one of the best in its class. Size 9x41/2.

Root \$1.00, Pot Root .75, Plant .50

OGDEN REID A-ID-Pi (Kelly-Parrella) General color effect is "ashes of roses." Very large in diameter. Stems long and slender. Plants very vigorous and branching. Profuse bloomer, Size 10x41/2.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

OHIO BEAUTIFUL B-StC-R (Parenica) One of the very finest of the dark ''reds'' of its type. Medium sized flowers on excellent stems. Its fine form makes it popular with the exhibition grower. Size 7x4.

Root \$1.50, Pot Root \$1.00, Plant .75

100% A-ID or FD-Pi (Beaver) Mauve pink flower of large size. Petals are broad and long. Good stems. Plants are vigorous with heavy dark green foliage. Size 10x41/2.

Root \$2.00, Plant \$1.00

ORANGE FLAME B-FD-Or (Seibel-Peck) The most brilliant orange color we ever saw in a dahlia. Flowers are of medium size, well formed with good depth, and are borne at a nice angle on long stems. A good bloomer. Plants are very vigorous, and open growers. Unsurpassed in it's color as a cut flower and a good exhibition variety, Size 7x4.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

ORANGE PRINCESS B-StC-Or (Geer) An attractive cactus with orange-red at centers shading to true orange at the tips. Medium sized flowers on strong stems, and a good keeper when cut. Size 7x4.

Plant \$1.00

- PARDNER A-ID-Or (Dozier-Robens) Nicely formed flowers for exhibition of peach buff on long ramrod-like stems. Plants are tall and rugged with dark foliage. Size 9x6.

 Root \$3.00, Plant \$1.50
- PATRICIA A-ID-Pi (Huey-Robens) an outstanding exhibition dahlia of light rose pink.

 Plants are husky and spreading, producing many blooms for a dahlia of this size.

 Size 11x6.

 Root \$5.00, Plant \$2.00
- *PINK GIANT A-ID-Pi. Large flowers of bright, clear, rose-pink. A great favorite with garden visitors and a fine show flower. It is a border-line variety as to type; being a true semi-cactus under some conditions when fully mature. Size 9x5.

Root \$1.00, Pot Root .75, Plant .50

PINK MUM B-InC-Pi (Grohall-Northbrook) A bright pink cactus with the shaggy appearance of a chrysanthemum as the petals curl and twist. Long stems and good keeping qualities make this a good cut flower as well as one for exhibition. Size 8x41/2.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

*POP HARRIS A-ID-R. An Australian of bright red and excellent form, large size and good growth. Stems are good, holding the flower facing the side.

Plant \$1.00

DAHLIA COLLECTIONS

Collections for those who are just beginning to grow the better exhibition varieties, or for those who wish a few more varieties to fill out their gardens. See page 40.

PREMIER'S WINSOME A-ID-Pi (Swezey) An early, free bloomer bearing lots of large flowers of an attractive satiny, light pink. No trace of mauve so common in "pink" dahlias. Plants are nice growers and fairly tall. A real delight in the garden and one which is winning it's share of ribbons on the show tables. Size 10x5.

Root \$1.50, Plant .75



PREXY

PREXY A or B-FD-Bi (Wind) Oxblood red, tipped white. Plants are open growers. Foliage is a very dark bronzy green. Like most bi-color varieties, this one produces some solid colored blooms. In spite of some erratic tendencies, we consider it the best formal bi-color in the class for "over eight inches." Size

Plant \$1.00

*PUNCTUEEL B-SC-Y Well formed, medium sized flowers on ideal stems. Clear, clean yellow. Size 7x4.

Root \$1.50, Plant .75

PURPLE HEART B-IC-Pu (Frank's) Well formed blooms of good substance on ideal stems. Rhodamine purple blushed lighter mallow purple; one of the best in it's class. Size 7x4.

Root \$5.00, Plant \$2.00

PURPLE MIST A-FD-Pu (Emmons) A large, well formed purple which starts blooming early and freely. A good exhibition variety. Size 9x4.

Root \$1.00, Plant .50

*PYGMALION A-SC or IC-Or. A Holland dahlia of real worth. Blooms are large. The color is an attractive orange-tan with peach-red suffusion toward centers. Plants are rugged and spreading. Size 9x4.

Root \$1.50, Pot Root \$1.00, Plant .75

QUEEN CITY B-FD-R (Peck) A light red, ball-shaped flower of medium size. An excellent keeper as a cut flower. Early and prolific. One of the best in it's class for exhibition. Sixe 7x5.

Root \$1.00, Pot Root .75, Plant .50

QUEEN ELIZABETH A-ID-Y. One of the finest large varieties to come out of the British Isles. A large, well formed flower of waxy, light yellow. The petals have excellent substance and are distinctively crimped at the outer edges. Like so many of the very large dahlias, this one has a stem which, under some conditions, appears to be a little short. Plants are rugged with heavy foliage. It is a dahlia which no one will mistake for another variety, it is so distinctive. Size 11x6.

Plant \$2.50

RADAR A-ID-BI (Strasen) An unusual color combination. Base of petals lemon-yellow shading to bright velvety red. Petals are flushed and edged gold, with gold reverse. Flowers are large and stems are good. Size 10x5.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

RAY SMITH A-SC-L (Scheffel) Mallow purple blended lighter tones of pale purple, lighter at the centers than on outer floral rays. General effect is lavender. Nicely formed blooms. Tall grower. Size 9x41/2.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

RED CHAMPION A-FD-R (Robens) Here is one of the largest of the formal decoratives. The color is spectrum red, blended buff with the base of the petals picric yellow. The general color effect is flame. Stems are strong holding the flower facing up. Easy to grow. Size 11x6.

Root \$10.00, Plant \$3.50



RED TORNADO

RED TORNADO InC (Eccleston-Rocky River) The color is a dark reddish purple with a lighter purple on the reverse. Petals curl and twist to form a chrysanthemum-shaped flower of rare beauty. Flowers up to ten inches with proportionate depth. Plants are tall growers with attractive fern-like foliage. Best if not over fed. Size 8x4.

Root \$5.00, Pot Root \$3.50, Plant \$2.00

REFUGEE B-IC-Y (Keck) A real addition to the yellow cactus class. The color is bright and lively. Stems are long and strong. Plants are open growers with glossy foliage. A free bloomer and a good cut flower. Size 7x4.

Root \$7.50, Plant \$2.50

*REV. PUGH. An Australian variety of very striking color. The flowers are a brilliant, orange-red, and of large size. Blooms are carried on top of very strong stems. Plants are exceedingly vigorous with dark green foliage. In type it is border line between formal and informal. Size 9x4.

Root \$2.00, Plant \$1.00

RHYTHM A or B-IC-BI (Dozier-Dahliadel) A medium sized variety of fine form and delicate coloring. The color is an unusual cameo pink suffused soft rose. Petals are serrated giving the flower added character. A good producer. Very useful as a cut flower and a consistent winner on the show table. Size 8x4.

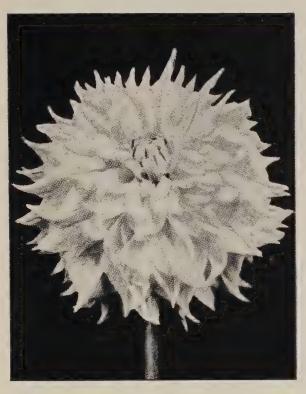
Root \$2.00, Pot Root \$1.50, Plant \$1.00

RITA WELLS A-ID or SC-BI (Ruschmohr) Without question, this one produced our largest blooms last season. Great depth give the blooms a massiveness which never failed to stop visitors. Blooms are held nicely erect on long strong stems. Plants are in keeping with flowers of such huge proportions. The color is grenadine pink on buff gold. Size 12x7

Root \$2.00, Plant \$1.00

CLUMPS

A clump list will be issued in early fall. This list is sent only to those who send in a special request for it. Clump offers are good only until December 1st with shipment not later than December 15th. If interested in purchasing clumps be sure to apply for the list early enough to get orders in before the December deadline.



ROBERT RIPLEY

ROBERT L. RIPLEY A-ID-L (Salem) One of the largest. It has unusual depth. Color is a deep lilac rose. Strong, cane-like stems hold the blooms facing up. The very strong, rugged plants are always covered with large blooms. Size 11x6. Plant \$1.00

RONNIE LEE A-SC-Or (Dorff) Large blooms of scarlet-red and salmonorange; general effect is orange. One of the best exhibition varieties introduced in 1945. An early bloomer. Size 10x6.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

ROSELYN STRAIGHT A-SC-BI (Straight-Wells-Ruschmohr) General appearance is apricot yellow shaded and streaked scarlet red; very tips of petals are lemon yellow. Fairly large blooms. Long graceful stems hold the flowers well above the plants. Very early and prolific. Size 9x4.

Root \$1.50, Plant \$.75

RUTH ANN SC (Dorff) Blend of empire yellow with grenadine pink. Petals are deeply serrated and crinkled. Attractive formation. Size 8x4.

Root \$7.50, Plant \$2.50

SALLY KLEIN A-FD-BI (Kelly-Parrella) General effect pink; described as Tyrian pink and pinard yellow with both colors showing in lines on the broad flat petals. Flowers have fine stems and good substance. A good variety for exhibition as it is a good producer of quality blooms. Size 9x4.

Plant \$2.50

SANTA CLAUS B-ID-Bi (Hendricks) A bi-color of scarlet tipped white and with the scarlet overlaid buff-yellow. Petals pointed and whirling like a pinwheel. A truly beautiful flower. Size 7x3.

Root \$1.50, Pot Root \$1.00, Plant .75

SARETT'S PINK FLAMINGO A-IC-Pi (Sarett-Ruschmohr) Outstanding in its class at shows. The color is Tyrian pink, with centers of empire yellow and tips of roseline pink. Blooms are well formed and of excellent substance. Centers and stems are excellent. Plant growth is vigorous; foliage dark green and tought. A free producer of flowers up to eleven inches in diameter. Size 9x4.

Roots \$3.00, Plant \$1.50

*SCARLET LEADER B-SC-R. One of the most brightly colored dahlias in the garden. Vivid scarlet blooms on excellent stems. A fine cut flower. Size 7x3.

Root \$1.50, Plant .75

SEPTEMBER A-ID-BI (Rainbow) A showy flower of reddish orange blended buff and rose pink. The medium sized flowers are produced in abundance on long stiff stems. Size 8x4.

Root \$7.50, Plant \$2.50

SESQUI QUEEN B-IC-BI (Frank's) Creamy white around the high center of grenadine purple, blending into deep rose-pink. Size 6x3.

Root \$5.00, Plant \$2.00

SHERWOOD'S PEACH A-ID-Or (Sherwood-Ruschmohr) This was the largest of the 1944 introductions in our plantings. Blooms have great depth and are carried facing side on cane-like stems. Plant growth is robust. Not an early bloomer but it is at its best for shows. Color is ocherous buff. Size 12x6.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

SIR GALAHAD A-SC or ID-BI (Comstock) A brilliantly colored dahlia of scarlet with a blush blend and a salmon-orange reverse. Flowers are fairly large with long stiff stems holding the flower on the side. Plants are rugged with dark foliage.

Pot Root \$2.25, Plant \$1.50

SKYROCKET A-IC-R (Sarett-Ruschmohr) A clear vermillion red of very neat appearance. Petals are rather wide and at times may be classed semi cactus. Stems are extra long and stiff, holding the blooms well above the plants. Size 9x4.

Root \$7.50, Plant \$2.50

*SNOWBALL A or B-StC or SC-W. One of the finest white cactus sorts for exhibition.
Blooms are quite large and deep. Stems are very good and the plants are good growers. Size 9x4.

Root \$2.00, Plant \$1.00



SNOWCREST



SON OF SATAN

snowcrest B-IC-W (Dahliadel) A white cactus of very fine form which will add zest to its class at the shows. Blooms are of medium size. Stems are ideal. Also a very free bloomer, producing many specimen blooms throughout the season. Size 6x3.

Root \$1.50, Plant .75

SNOWDRIFT A-FD-W (Robens) One of the largest of its type with broad petals, perfect centers and long stems. A pure, clean white. Size 10x41/2.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

One of the largest and brightest of its type, intense flame red on excellent stems. Blooms up to twelve inches in diameter. Tall, open bush growth. A sensation in any garden and a winner in any show. Size 10x5.

Root \$1.50, Pot Root \$1.00, Plant .75

SOPHIE K. HEINTZ B-IC or SC-BI (Parenica) Outer rows of petals are carmine rose tipped yellow. Centers are lemon yellow. An unusual color set up. Size 7x3.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

SOUTHERN ROSE A-ID-Pi (Dozier) One of the best and most attractive of the 1945 introductions. Flowers are large and of brilliant rose pink. Stems are excellent. A good bloomer. Size 10x5.

Root \$3.00, Plant \$1.50

SOUTHERN THOROBRED A-SC-L (Dozier) This is one of the very largest, and it is a very good bloomer too. The blooms are very deep and shaggy. Color is rose-lavender. This variety is a frequent winner in "largest bloom" classes. Plants are tall with dark, glossy foliage. Very outstanding. Size 11x7.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

STALIN B-IC-R (Zazo) A bright, velvety, non-fading red. Blooms eight to nine inches on excellent stems. Keeps very well as a cut flower; having exceptional substance. We believe this will endure after many of the other 1943 introductions are forgotten. The plants are strong growers. Size 7x4.

Root \$1.00, Pot Root .75, Plant .50

STELLAETTE A-IR-R (Delbrugge) A tall, rugged plant, producing velvety, deep red flowers of large size. Cane-like stems carry the blooms erect at all times. Size 91/2 x4.

Root \$3.00, Pot Root \$2.25, Plant \$1.50

stephen foster A-IC-Or (Salem) This is one for the large cactus classes. Flowers are consistently ten to twelve inches in diameter. Plants are tall and very hardy; growing well under all conditions. Because of its all-around good habits and uniformly high quality, it is one of the few "first year" dahlias that we have recommended. The color of the flower is orange-buff, lightly suffused with Tyrian rose on both the face and back of petals. Size 10x5.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

STEPHEN H. A-SC-Bl. Blend of empire yellow with grenadine pink. Petals are deeply serrated and lightly crinkied. Size 8x4.

Root \$7.50, Plant \$2.50

STRAIGHT'S WHITE A-ID-W (Ruschmohr) A large, well-formed flower of pure, glistening white. The long narrow petals roll and twist in a most artistic manner. Bushes are exceptionally vigorous for a variety of this color. Size 91/2x5.

Root \$1.50, Plant .75

*ST. THERESE B-StC-Bl Dainty in formation and coloring. The tightly rolled petals give the flower an "airy" appearance and the delicate coloring of light lilac pink with white centers adds up to real beauty in the pastel shades. Size 6x3.

Root \$2.00, Plant \$1.00

SUNBURST A-ID-Y (Smith) A massive flower of deep golden yellow. A really worthwhile addition to our list. Plants are strong growers. Stems are strong. Flowers are carried well above the foliage. Size 10x7.

Root \$5.00, Plant \$2.00

SUNSET SPECIAL A-SC or ID-Or (Dozier) Large, flame-orange blooms with yellow reverse showing on the face of the flowers as petals twist. Blooms have good depth and substance, keeping well on the plant and after cutting. Size 9x4.

Root \$2.00, Plant \$1.00

SUPREME COMMAND A-FD or ID-R (Boram-Parrella) Bright scarlet-red with a bronze sheen. Good grower with heavy foliage. Size 9x6.

Root \$3.00, Plant \$1.50

*SYDNEY A-ID-BI. This is one of the finest New Zealand dahlias which has come to our notice. The color is a beautiful rose-pink with a tinge of gold throughout and at the base of the petals. Blooms are large in diameter and the petals roll back to the stem forming a massive flower. Stems are excellent. Plants tall. Size 9x4.

Root \$1.50, Pot Root \$1.00, Plant .75

DAHLIA SEED

Our dahlia seed is unsurpassed.

See Page 41



TERRY

Bushes tall. Size 8x4.

TERRY A-ID-L (Zazo) One of the most distinctively formed dahlias we have ever seen. The petals are long and narrow with serrated tips; rolling back to the stem in the manner of a deep informal decorative, but they are revolute as in cactus types. The flowers are large and correspondingly deep. The color varies from orchid-pink to pure lavender. Plants are low but of sturdy growth. Size 10x6.

Plant \$1.50

THE GOVERNOR A-FD-Y (Dahliadel) A large, bright, sulphur yellow, which is definitely a formal. True formals are scarce and this is a welcome addition. The petals are broad and turn back at the tips, giving the flower good depth. One of the leading winners in its class the past season. Size 9x4.

Root \$1.50, Pot Root \$1.00, Plant .75

THE RANGER B-IC-BI (Salem) The color is true purple with white veins running the length of the petals; reverse is pure white, which shows on the face as the bloom matures and the petals roll and incurve. A dahlia for beauty as well as exhibition. Blooms are medium in size.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

THE REAL GLORY A-FD-W (Goodacre) A pure waxy white of good size, notable for its exceptional substance and good keeping qualities. The flowers are well formed and are carried nicely on perfect stems. It is a real competitor in the white formal classes. Strong grower. Size 9x4.

Root \$1.50, Pot Root \$1.00, Plant .75

TOP FLIGHT A-SC or ID-R (Dozier) A fairly large bloom of very "neat and trim" appearance. The color is bright blood red, which does not fade even in the hottest weather. Stems are long, holding the flower facing slightly up. Bushes are tall. Size 9x4.

Root \$1.50, Plant .75





TOPS A-ID-Y (Dozier) A real giant of the exhibition tables. The massive blooms are a clear yellow of one shade. Stems are good. Has won many awards as the largest bloom in the show. A well "finished" bloom has a decided tendency to be semi-cactus. Size 10x6.

Root \$2.00, Pot Root \$1.50, Plant \$1.00



TOPS



Ox-blood red with outstanding cut flower qualities. One of the first to bloom in the fields and very prolific. Petals have good substance. Occasional blooms are bicolors being tipped

TWO IN ONE InC-SC (Wolfe-Rocky River)

white. A fast grower with dark foliage and nodes well spaced. Size 6x4.

V-DAY A-ID or SC-Bl (Hendricks) A new color of mulberry-rose. Blooms are large with good depth. Plants are vigorous and free branching. A profuse bloomer.

Root \$1.50, Plant .75

TWO IN ONE

VICTORY A or B-FD-Pi or BI (Asther) Here is a large dahlia with good depth that is very formidable in the formal pink class, as well as being a very pleasing variety in the garden. The color is rose-pink with a golden suffusion. Tall plants producing many fine blooms. Size 8x4.

Root \$1.50, Pot Root \$1.00, Plant .75

VIRGINIA RUTE A-ID or SC-R (Siebrecht) One of the outstanding dahlias in our list. Flowers are very large, deep, velvety, dark red of neat formation. Petals are broad and rolled to a point at the tips. Plants are tall, with blooms held high above the foliage on excellent stems. Early bloomer. Also a good root-maker. Size 11x6.

Root \$1.50, Pot Root \$1.00, Plant .75



SOUTHERN STATES DAHLIA SHOW

The second annual show of the Southern States will be held at Hotel Patton, Chattanooga, Tenn. at a date to be announced. We attended the first of these shows at Birmingham, Ala. last fall, at which show, we were surprised to find that the growers in that section are producing exhibition blooms equal to those of sections which have been considered more favorable for dahlias. We intend to attend the show at Chattanooga this fall to visit our friends and customers in that area, and we feel that more northern growers will attend this commendable undertaking of a Southern States show.

volcano A-FD-R or Or (Richardson) A very large, well-formed flower of great depth. This was a standout in our gardens from early in the season until frost. The color is orange-flame red. The plant is a very strong grower with heavy, leathery foliage, which is insect resistant. Size 10x6.

Root \$1.50, Plant .75

wanda Meade B-ID-Bi (Parrella) Scarlet red tipped white with crinkled petals. Medium sized flowers which keep well. Very showy in the garden or display. Size 6x3.

Root \$1.50, Pot Root \$1.00, Plant .75

*WEISSER HIRSCH B-StC-W. A very fine white cactus, with just a trace of lavender. Each petal is deeply cleft, giving the flower an appearance of great "fullness." Size 7x31/2.

Root \$1.50, Pot Root \$1.00, Plant .75



VOLCANO

WENDY B A-SC-L (Garfield) A fairly large bloom with good depth. Color is lavender with lighter suffusions. Sturdy plants. Size 9x4.

Plant \$1.00

WHITE BEAUTY A-FD-W (Robens) Probably the largest of the white formals. Tall growing plants blooming at mid-season. Stems and quality of the flower suits it for exhibition.

Root \$7.50, Plant \$2.50

WHITE WINNER B-ID-W (Wolfe) A long stemmed, full centered flower, with unusually heavy petal texture. Vigorous plants are covered with flowers from early season until frost, producing well in the hottest weather. Size 7x3.

Root \$1.50, Plant .75

Join Your Dahlia Society

Dahlia societies are the backbone of dahlia interest and merit your active and financial support. Nearly every state, and many localities in these states, have societies working in the furtherance of general dahlia culture and the dissemination of information regarding all phases of this culture. We will be glad to furnish such information as we may have in regard to the ones nearest you.

The American Dahlia Society and The Central States Dahlia Society publish interesting and informative bulletins for their members. Write us for membership applications.



WINDLASSIE

WINDLASSIE B-ID-W (Rocky River) One of the whitest white dahlias we know. Petals are overlaid with a glistening sheen. When fully developed, this is one of the most ball-shaped flowers in this list. Classed as a "B" flower it is almost alone in the white informal class. Grown to its maximum of nine and a half to ten inches it has beaten the largest white informals now being shown. Flowers cut when they are apparently "prime" continue to grow in water and the back petals close in tightly around the stem. In spite of its ball-shape it does not bruise easily when packed to take to show. An excellent variety that has an outstanding record of "best bloom" at shows. It is an open grower. Size 8x5.

Root \$10.00, Pot Root \$7.00, Plant \$3.50

WINGS A-SC-R (Geer) Dark carmine, almost blood-red. Long, strong stems. Early and free bloomer. Size 10x5.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

*WM. H. SHINKFIELD A-ID-Cr. A large Australian exhibition variety of real merit. Stems are excellent, holding the massive blooms erect, facing the side. The color is rich golden bronze. Twisting petals show the peach reverse. Size 10x5.

Root \$1.50, Plant .75

WOLFE'S GOLD A-InC-Y (Wolfe) A broad petaled flower of deep yellow. Plants are tall and vigorous with dark, glossy green foliage. Size 91/2x5.

Root \$3.00, Plant \$1.50

WORLD EVENT A-ID or FD-Pi (Hendricks) A rose pink which fills a need in its classes at shows. Also a pleasing variety in the garden. A good grower and bloomer. Flowers carried facing the side on strong stems. Good size and depth. Size $9\frac{1}{2}x5$.

Root \$1.50, Plant .75

*WOSAL A-ID-BI Color is a deep old rose suffused salmon and buff. Flowers are large and deep and the stems are strong. Size 10x6.

Root \$2.00, Plant \$1.00

*XANTINE A-FD-Y. One of the best in it's class. Flowers are large and have excellent substance. Stems are long and strong. The color is light lemon-yellow. Plants are tall and rugged. Size $9\frac{1}{2}x4$.

Root \$2.00, Pot Root \$1.50, Plant \$1.00

YELLOW GLORY A-SC-Y (Dahliadel) A very large, lemon yellow with curled and twisted petals. Attractive, with good exhibition qualities. Size 10x5.

Root \$1.50, Plant .75

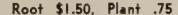
YOUR LUCKY STAR A-SC-BI (Wallace) A great favorite in our gardens. An unusual combination of dainty coloring in a large flower. The outer petals are lilac pink shading to a distinct white at the centers. Size $91/2 \times 5$.

Root \$1.50, Pot Root \$1.00, Plant .75

*YOWU MATSUOKA A-Sc or IC-R. A large ox-blood red of good form which, although we class it as semi-cactus, is often a true cactus. In either class it is usually a contender on the exhibition tables. Size 9x4.

Root \$1.50, Pot Root \$1.00, Plant .75

ZEPHYR B-StC-R (Wind) Certificate of Merit at East Lansing with a score of 85.8 C. The general color effect is a rich cardinal red. Substance rated as excellent. Stems are of medium length. Very abundant flowering habits. The bushes are free branching with a height of four feet and a spread of four feet. The branches are slender to the base, but are rigid and erect, permitting cutting with long stems. The foliage is dark green. Plants do well in the open field with a minimum of care. We have found this to be the answer to a demand for a dark red cactus. Size 6x3.





ZEPHYR

Small Flowered Dahlias

These small flowered dahlias are becoming very popular because of their general usefulness. They lend themselves nicely to effects in the landscaped garden, or in the borders, furnishing a mass of color over a long season. As a flower for arrangements, they are ideal, lasting a long time, and their great diversity of form permits unlimited possibilities in their arrangement. They also hold a prominent place in all dahlia shows.

The small flowered sorts require less care and attention than the larger types. No disbudding is necessary; the smaller the flower, the better. They require less space than the large types and staking is unnecessary except for the taller growing sorts. All are selected for their free flowering traits. The varieties in the following list average twenty-four to thirty inches in height unless otherwise noted. Ordinary garden soil is preferable to "rich" soil for early and profuse blooming.

See classifications on page 3

	Root	Plant
ALICE J Ba-Pi Large pink. Outstanding ball	\$.75	\$
ANDREA'S ORANGE M-StC or SC-Or Bright orange		.50
*ARABESKA M-C-Y Sulphur yellow. Good		.75
BETTY ANN Pom-Pi Clear light pink	.50	
*BISHOP OF LLANDAFF M-Dup-R. Scarlet with golden centers. Showy	.50	

BRASS BUTTON Pom-Y Deep golden yell			.50
BRIGHT FLASH S-R Large, bright red.	Tall. Good	.50	
	BRIGHT IDEA M-FD-Bi Very outstanding. Red tipped white		\$.75
	BRONZE BEAUTY Pom A good cut-flower. Bronze-orange.	.50	
	BUCKEYE BABY M-FD-Or An exhibition sized miniature of tan-orange		
THE STATE OF THE S	CHARLOTTE CALDWELL Ba- Or Low Growing border plant. Orange		
	CLARA CLEMENS Ba-Bi Dark red, white tips. Fine	.75	
	CLOVER Pom-Bl A tiny exhibition sort. White faintly edged pink	1.00	.50
BRIGHT IDEA	CORAL BLEND M-FD-Bl Blend of pink and cream	.50	
DEE DEE Pom-L Good quality lavender	oom. Long stems	.50	
DOUBLE VICTORY M-SC-R Excellent, br		1.50	.75
DRUIDSVILLE M-SC or StC-W Best white	e of the cactus types. Fine lacy	.75	
DUSKY M-Ba-R Small dark red ball		.75	
FAIRY M-FD-L Fine for exhibition or cut	ting. Pink to lavender pink	.50	
FUCHSIA GEM M-SC-Pu. True fuchsia.	Small and good		1.50
GAY LASSIE S-BI A most attractive singl		1.50	.75
GIRSHAM Pom Well formed exhibition ty	one Pink with white centers	1.50	.50
GOLF BALL Pom-Bl Very deep pom. Tan		1.00	.75
HONEY Pom-Bl An old favorite. Yellow		.50	
ILA Pom-R The outstanding red exhibition			.50
JEAN KERR Ba-W A cutflower of merit.		1.00	.50
LEMONADE M-FD-Y New, lemon yellow with good stems			.50
LITTLE BLUE STAR M-ID or SC-Bi Purple tipped white		1.00	.50
LITTLE DIAMOND M-SC-Pi One of the finest pink semi cactus			
LITTLE DAVID Pom-Or Well formed reddish orange			
LITTLE EDITH Pom-Bl Small exhibition variety. Yellow edged deep red			
*LITTLE MARVEL Pom-R Well formed fiery red			1.00
LITTLE PEACHES M-StC-Pi Very good pink blended buff			.50
LITTLE ROSE Pom Small, well formed blooms. Good			
LITTLE WISTERIA M-FD-L Wisteria shades with darker centers			

MARGARET WILLIAMS Pom-L Small, violet-rose. Exhibition		1.00
MARKET GLORY M-SC-Pi Reliable cutflower. Rose pink	.75	
MARKET JEWEL M-SC-R Attractive, brilliant blood-red		.50
MISS MARJORY Pom-Pu The outstanding purple exhibition pom		.50
MISS PLUMB M-FD Rhodamine purple		1.00
MORNING MIST Pom-Bl Cutflower sized pom. White edged lavender	.50	
MRS. FRENCH Pom-Pi Light pink. Exhibition		.75
MRS. J. TELFER Pom-W Good white		.50
NANCY M-FD Vivid scarlet red		1.00
ORANGEADE M-FD Orange	1.00	.50
PEQUOT YELLOW S-Y Clean yellow. Good	.50	
PLEASURE S-BI Dark lavender, purple center	.50 .50	
RED DELIGHT Coll-R with Y One of the finest and showiest collarettes		.50
REGAL Pom-Pu Royal purple. Well formed	1.50	.75
RHONDA Pom-Bl Pink and lavender with lighter centers. One of the finest poms.		1.00
RIFLEMAN Pom-Pi Tiny, coral pink		.50
ROSIE Pom-Bl Lavender and rose. Good	1.50	.50
ROSY DAWN Ba-Bl Golden yellow, edged and flushed red. Very outstanding	.75	
RUDD Pom-R Wine-red		
SATIN WHITE Coll-W. Excellent white collarette		
SHERRY Pom-Pu An old favorite. Deep purple		
SHIRLEY BROWN Pom Pink with distinct white centers		
SNOW M-FD-W nicely formed white on long stems. Tall	1.00	.75
TANGO CENTURY S-Or Tall growing, orange single	.50	
WHITE FAWN M-FD-W Fine for cutting or exhibition. Pure white	.50	
YELLOW GEM Pom-Y. Light yellow	.50	
COLLECTIONS		
Varieties in collections are all different and all labeled but are strictly of	our sele	ection.
COLLECTION A: Six pompons (roots)		.\$1.50
COLLECTION B: Six miniatures (roots)		. 1.50
COLLECTION C: Four plants, to acquaint customers with our superior pl	ants .	. 1.00
COLLECTION D: Eight roots of large types with a value of not less that		
Buyer may state preference for large type or for cutflo	wer siz	e 5.00
COLLECTION E: Twelve plants of either large type or cutflower size. of not less than \$7.50		
COLLECTION F: One plant each of our four great 1945 introduction Monarch, Clariam Kelton, Kirsten Flagstad and Jane I All are pictured in this catalog. Value \$7.00	_ausiche	∍.

DAHLIA SEED



MR. PAPE, GROWER OF THE SEED WE OFFER

After extensive trials by ourselves and customers, we are prepared to make claims of distinct superiority for our seeds. These seeds are grown for us in Southern California from stock of our best varieties, which we send there for the purpose of seed production. The grower is a man of more than twenty-five years experience in dahlia growing. No small type dahlias are grown on his ranch.

In California, more varieties will produce pollen and seed than in any other section of the country. This not only produces seed from a greater number of parents, but it also permits a far greater number of crosses, thereby enhancing the chance of something new and distinctive.

	seed of large flowered decoratives		
100	seed of cactus varieties	5.00	net
100	seed of large flowered semi-cactus	5.00	net
	seed, any type or mixed		

SEEDLING PLANTS

The growing of dahlias from seed is rapidly becoming a "side hobby" of dahlia enthusiasts. Each dahlia produced from seed is a new variety, and the one who produces it is privileged to name it and control the stock of it. Altho a great majority of the new varieties produced from seed are inferior to existing varieties, the thrill of anticipation in watching the first blooms open on each plant, and the greater thrill when something outstanding appears, makes the growing of seedlings a most fascinating project.

For those who do not have the facilities for growing the seedling plants (seed sown indoors March 1st to 15th), we are offering seedling plants. These plants are from the same high grade seed offered above. The plants are carefully grown and "hardened off," and are ready for the garden when received. Priced as follows:

\$2.50 net per dozen out of two inch pots. \$1.50 net per dozen out of flats (no soil).

Cultural Hints

Although dahlias may be grown in almost any ordinary garden soil, to produce a beautiful effect in massed color with but little attention, they respond very readily to a little extra care.

Fine dahlias are the result of a number of factors, most important of which are: (1) good vigorous disease-free stock; (2) choice of varieties which naturally produce high quality blooms; (3) location of the garden; (4) proper planting; (5) cultivation; (6) intelligent fertilization and spraying; (7) pruning and dis-budding; and (8) the successful winter storage of the clumps.

Factors (1) and (2) need no comment other than that varieties which we offer in this catalogue are the result of several years of careful selection from the finest novelties placed on the market from all parts of the world. Each year we try many new sorts, then discard those which have no definite place in the better class gardens, and offer only the best to our customers. Our fields are carefully and frequently inspected. All inferior plants and those showing any symptoms of disease are destroyed. Our cultural methods are productive of the very finest quality roots and plants obtainable.

Selection of the location for the garden is usually quite restricted, but fortunately dahlias will do well in any type of soil and in a wide variety of climate. A good site is one that receives several hours of sunlight each day and has good drainage, so that water does not stand on the ground very long after rains. More important than the type of soil, or the location of the garden, is the condition of the soil at planting time, and during the growing season. We believe that more failures with dahlias are due to the lack of proper conditioning of the soil than to any other single factor. This is especially regrettable since it is a factor which may be easily controlled.

The soil of the garden should be kept loose while the plants are growing, especially in the early part of the season. Light, sandy soils need the least preparation, providing they contain enough humus to hold a sufficient amount of moisture. Humus may be supplied by planting a cover crop of rye in the fall to spade under in the spring, peat moss mixed into the soil, barnyard manures, and by vegetative refuse such as lawn grass clippings, leaves, etc.

Heavy clay soils may be made lighter by the generous use of furnace ashes or cinders mixed with the soil of the garden, or just in the hills. Lime also tends to loosen the soil but should not be used oftener than every four or five years and never in connection with barnyard manures. A cover crop of rye also aids in the loosening or lightening of the soil. Stirring the soil frequently to a depth of five or six inches helps to maintain the soil in proper condition. It must be remembered that the tender roots of the dahlia will not reach out as readily in search of food, in hard ground, as they will in looser soil. The dahlia is a very heavy "feeder" and needs a large, efficient, root system. Also, air and water penetrate more easily into loose soil to aid in the chemical transformation of soil elements into plant food.

Spade the garden two or three weeks before planting time. Leave the surface rough until actual setting of the roots or plants. Never try to "fit" the soil when it is so wet that it sticks to the tools. Planting should not be started until the soil has started to warm up in the spring, which in the latitude of northern Ohio is about May 15th to May 20th. Planting may be continued until June 15th or later.

We suggest planting in furrows or trenches about five inches deep, running the length of the row. Place the root flat in the bottom of the trench and cover with two or three inches of soil. Fill in the rest of the trench as the plant grows. Rows should be at least three, or preferably, four feet apart. Plants in the rows should be thirty-six inches apart when planting large sorts. (Small type dahlias sixteen to twenty-four inches apart.) Stakes to support the plant later, may be driven at planting time, five or six inches from the eye or sprout. In planting green plants, we suggest soaking the ball of soil on the roots in a bucket of water for several minutes before planting. This eliminates watering after planting, thereby preventing "puddling" of the soil surrounding the plants. Our plants require no shading as they are well hardened. Plants which have been en route for five or six days may be acclimated to open air conditions by set-

ting them in the shade for a day or two after they are received. We do not recommend washing the soil off the roots before planting as is sometimes done. We have found that shallow planting of plants is conductive to better clump formation. For this reason we recommend that the ball of soil surrounding the plant in the pot be covered with no more than an inch of soil when planted in the garden.

Many failures with "GREEN PLANTS" are due to improper cultural methods at the start of the growing season. Normal growth should be the aim. It is not uncommon for the gardener to employ all methods within his knowledge to get his plants off to a fast start. A fast growth is also a soft growth which is easily injured by the heat and dry weather of mid-summer. Such injuries result in a check to the plant and a resultant hardening of the plant tissues. When the tissues become hard, or woody, they lose their properties to expand, or grow. Thereafter, no greater amounts of plant food can pass up through the stalk than was the case when the hardening took place. Growth practically ceases. When this has occurred, first class results can be obtained only by cutting the plant back to the ground and starting all over. In many cases this will be too late to obtain blooms.

Hardening may also be caused by a number of other factors. In some cases the condition may have been induced by planting too early, when the soil is too cold for normal growth. Some other factors which may cause this condition are: setting plants in the garden which have not been properly "hardened off" in cold frames, allowing the plants to dry out, excessive water, lack of cultivation, root injuries due to insects or fertilizers, as well as a number of others not so common. When growth has been normal the plant can cope with conditions which would cause a soft plant to suffer a check.

Cultivate once or twice each week to a depth of five or six inches in the early part of the season. Right next to the plant cultivation should not be as deep or some of the roots are likely to be cut off or injured. When the plants are in bloom and the spaces between the plants are pretty well filled with foliage no further cultivation will be necessary.

Water only in very dry weather. One thorough soaking is far better than several light sprinklings. Frequent watering brings the roots too near the surface where they are quickly injured by heat or drought. More water will be required after the plants start blooming than earlier in the season.

There are a number of elements in the soil which are needed for proper plant growth. Of these elements there are only three which are likely to be present in lesser amounts than needed by the plant. They are NITROGEN, PHOSPHORUS, and POTASH. In order to arrive at an intelligent fertilizer program we must understand the purpose of the above elements to the plant.

NITROGEN is needed for bush growth, dark green foliage, and large flowers. Plants growing in soil which is lacking in nitrogen show a yellowish cast to the leaves, low growth, failure to develop buds properly, and small flowers of poor color. Too much of this element produces a tall growth, soft plants, delays blooming, weakens stems, and reduces the keeping qualities of the roots in winter storage. It will injure leaves and roots if applied directly, or too close, of them. The common sources of nitrogen are cover crops, dried blood, fish scraps, barnyard manures and commercial fertilizers.

PHOSPHORUS is the most important from the dahlia grower's standpoint. It is essential in all plant functions. It hastens blooming, increases root development, stiffens the stems, increases the general vitality of the plant, and it overcomes the harmful effects of excessive nitrogen as well as certain other adverse soil conditions. Phosphorus is not harmful even when applied in excessive quantities. The common sources are: super-phosphate, double superphosphate, and bone meal. The latter also contains a small amount of nitrogen.

POTASH increases the general vigor of the plant, it is essential in the chemical changes occurring in the plant, and root formation is dependent upon its presence. The common sources are: muriate of potash, and sulphate of potash. Hardwood ashes are sometimes used as a source of potash but are not to be recommended owing to their variability in potassium (potash) content.

As a general thing, it is advisable to broadcast an 0-20-20 fertilizer over the garden about two weeks before planting. Five or six pounds per hundred square feet

of space is a good application. It should be thoroughly mixed into the soil when digging as the phosphate element is not readily moved down into the soil by water action. In some instances, owing to unfavorable soil reactions, it may be advisable to concentrate this application in the hole as it is prepared for planting. In this case, mix a good handful of the fertilizer in the soil under and around the plant. Avoid having any of the fertilizer in direct contact with the roots. This latter method will often remedy the failure of plants to make good clumps of roots. 0-20-20 is a commercial fertilizer formula indicating; no nitrogen elements, 20 per cent phosphorus and 20 per cent potash.

In average garden soil it will not be advisable to apply a nitrogeneous fertilizer at planting time, but if experience has proven that satisfactory growth early in the season is not possible without it, a small amount of barn-yard manures (well rotted) may be mixed with the soil at planting time. Nitrogen fertilizers are more satisfactorily used later in the season, after buds are formed, to give extra size to the blooms. A small quantity scattered lightly around the plant, not nearer than a foot from the stalk, and watered into the soil will decidedly increase flower size. One or two more, very light, applications at intervals of a week or ten days may further increase size. Dried blood and sheep manures are commonly available sources of nitrogen at most supply dealers. It should be noted that with the application of a nitrogen fertilizer the keeping qualities of the roots is reduced. Each subsequent application further reduces this keeping property and excessive application will injure the plant, and in cases, destroy it. Also, such applications tend to reduce the vitality of the stock for the following year. It will be well for each grower to determine which is of greater importance to him; extreme size, or good keeping roots of high vitality. Many leading exhibitors sacrifice their stock for utmost size of bloom, and purchase, or grow, other stock for the following year. Others try to strike a happy medium and still others avoid nitrogen fertilizers for "forcing" and depend on heavy disbudding and pruning for comparable results.

Regardless of which of the above plans are followed, some disbudding must be employed to bring out all the size possible in a bloom. After the buds appear it will be noted that they usually come in clusters of three. The one in the center is generally the strongest. Remove the other two and the effort that the plant would expend in producing flowers from them goes to the terminal bud which is left. The next two or three sets of branches (at each leaf below the terminal bud) may also be removed, further increasing the size of the bloom to be produced. Be sure, however, that at least one set of branches is left to produce the next flowers.

Many varieties have a tendency to grow straight up with but a single stalk. If a bushy plant is desired pinch out the top of the plant when it is about eighteen inches tall. Other varieties may produce too many branches in which case some may be cut out. Plants which have been pinched out may be dis-budded as per instructions above.

Successful control of insects is of prime importance in most localities, owing to the direct damage they do to the plants and the indirect damage caused by the insects carrying diseases from one plant to another. The first principles of effective control are proper insecticides and thorough applications at frequent intervals.

DDT has proven so highly successful as a control for many of the insects infesting dahlias that it is now the basis of nearly all our insect control recommendations. On those insects not controlled by DDT, we recommend a material that is compatible with DDT and can be used in the same spray or dust. Wherever DDT is recommended, either a 3% dust or a spray containing $\frac{3}{4}$ pound of actual DDT per hundred gallons is meant unless otherwise specified.

In the pest control program at our Rocky River farm, we use a spray as it is somewhat more effective and the material remains effective for a somewhat longer period on the plants. Spraying at intervals of two weeks is sufficient for excellent results in controlling most pests. Dusts may need to be applied at weekly or ten day intervals. We suggest that applications be not made oftener than necessary for good control.

The efficiency of DDT is due to the fact that it is long lasting in it's effectiveness against insects, and because it is not necessary that the insects be present at the time of application. Any of the insects controlled by it will be killed simply by walking across sprayed surfaces as much as two weeks after applied. Rain does not greatly reduce the effectiveness of the material on the plants. Application may be made at any time of the day. DDT is compatable with most insecticides, except those containing lime, and may be applied at the same time in one application.

If a dust is preferred, a 3% dust can be purchased ready to use, which will do the job as well as dusts of higher concentrations, and with less possibility of ill effects to plants. If a 3% dust can not be purchased in your locality, a dust of higher percentage of DDT may be reduced to 3% by adding the proper amount of talc or sulphur. Never use lime with DDT.

The spray which we use is made up to contain \(^3/4\) pound of actual DDT crystals to 100 gallons of water. To make up the spray, a wettable powder should be used. Most of the powders on the market for this purpose also contain spreaders so that it is not necessary to add anything to the powder. We use Deenate 25W manufactured by duPont, which contains 25% DDT, or one fourth of each pound. Thus it will require three pounds of the 25% material to supply the \(^3/4\) pound of actual DDT needed for 100 gallons of water. This is approximately \(^1/2\) ounce per gallon.

DDT is not soluble in water but mixes readily to form a suspension (materials suspended in water). Since it is a suspension, it is necessary to keep the material well agitated after mixing until used. In this form (suspension), DDT is not injurious to the user and can easily be washed off the hands. However, it is well to avoid contact of the material with the skin as much as possible.

CAUTION: Be sure the material you purchase is made specifically for application to plants.

APHIDS cause a lessening of vitality by sucking plant juices. Easily detected as they usually are found in clusters on the stems and around buds. Soft bodied insects which remain quite stationary on the plant. They may be black, red or green. Control by dusting or spraying with contact insecticides such as nicotine sulfate (Black Leaf 40), pyrethrum extracts or rotenone according to manufacturer's directions. DDT is partly effective on aphids but can not be relied upon to control them completely at all times. However, the suggested materials for aphid control can be combined with DDT.

CORN BORERS drill holes into the stalk, usually at a leaf or branch. They live and grow inside the stalk, eventually enlarging their bores until a portion of the plant is so weakened that it breaks down. The adult moth of the corn borer lays it's eggs on a leaf. As the eggs hatch the larva starts moving toward the stalk eating tiny trails in the leaf surface. It is at this time, only, that control measures are effective. DDT is a very effective control. The material must be present on the plant surfaces as the eggs hatch and the larva start for the stalk. For best results it may be advisable to apply the DDT at shorter intervals during the short hatching period. Your County Agricultural Agent may be able to tell you when that period will be.

CUCUMBER BEETLES are sometimes quite serious pests of dahlias. They eat holes the petals of the flowers, disfiguring the blooms. There are two common types of the cucumber beetle. One is the Twelve Spotted Beetle, characterized by twelve black spots on the greenish wings. The other is the Striped Beetle, which has alternate black and yellow stripes on the wings. Chlordane, used as a 5% dust or as a spray according to manufacturer's instructions, has been found highly successful in their control. Cryolite is also an effective control.

CUT WORMS hide under clods or in the soil during the day and emerge at night to cut off young plants, usually at soil level. If these pests are not too numerous they may be controlled by carefully searching the top inch or two of soil within a few inches of the plant and destroying the grub which is often two inches long and fleshy. Heavy infestations may be controlled by scattering poison bran mash lightly over the garden area. DDT is effective for climbing cutworms and others when they must cross sprayed or dusted surfaces.

GRASSHOPPERS need no description. Chlordane is very effective against grass-hoppers used as for Cucumber Beetles. Damage to dahlias can largely be prevented by spraying, or dusting, a wide area around the dahlia plot, thereby killing them before they get to the dahlias. No damage has been noted to dahlia foliage when this material has been applied to the plants, and when it is not practical to treat adjoining areas, the spraying of the plants will satisfactorily eliminate the grass-hoppers.

JAPANESE BEETLES which are very destructive to blooms, and their presence readily detected, can be controlled by DDT sprays. Treating the soil, in which the adult beetles lay their eggs, with DDT will destroy the grubs before they emerge from the ground in the spring. Five pounds of a 10% DDT per 1000 square feet is the usual recommendation. Lawns thus treated are not harmed.

LEAF EATING INSECTS AND CATERPILLARS, whose presence is evident by their eating of foliage, readily controlled by spraying or dusting with stomach poisons such as arsenicals. DDT also seems to control, either as a spray or dust.

LEAF HOPPERS are small greenish-yellow, flying insects which are very active in warm weather. Disturbing the plant will cause them to fly rapidly away and they can best be detected in this way. They are usually found on the under sides of the leaves sucking the plant juices, causing the edges of the leaves to turn yellow, eventually browning and destroying entire leaves at the bottom of the plants. Previous controls have not been very effective unless applied every two or three days. DDT will control them almost 100%.

RED SPIDER MITE, or simply red spider, are very small black and white to brownish, minute insects, nearly always found on under sides of the leaves. A magnifying glass is necessary to see these tiny insects but their damage is apparent by browning of the lower, and to lesser degree, the upper surfaces of foliage. Under sides of the leaves usually appear to have ''rusty'' areas and a sort of silky appearance. In the past they have not been serious pests of the dahlia except in isolated cases. However, if DDT is used as a control for other insects, it is likely that red spider mite will be very prevalent and cause much damage if not promptly controlled. To make matters worse, DDT kills the predators or parasites which normally feed on the mites. "Dowspray-17" applied according to manufacturer's directions has proven highly effective as a control, especially when combined with DDT. Dowspray-17, as the name applies, is a spray material manufactured by the Dow Chemical Co., Midland, Mich. It seems far superior to all other standard red spider sprays. "DN-269" another DN compound has proven effective as a dust and much more effective than any previous dust for this purpose. Applications of spray or dust must be thorough and applied to the under sides of the foliage as well as the upper surfaces. If Dowspray-17 is used, great care must be exercised to weigh the material accurately and to keep the material in suspension by vigorous agitation, while spraying. High pressure sprayers developing 200 pounds pressure, or more, are advisable as the material is applied more evenly and with less "runoff", thus eliminating the two chief causes of foliage burn. A third cause of foliage burn is the use of the material when temperatures are high. DN-269 is safer to use but must be applied at ten day intervals, and more care must be used to apply it lightly and evenly to infected areas (undersides of the leaves). NNOR may be used as an alternate material for the control of red spider; this in spray form.

TARNISHED PLANT BUGS are small plant bugs about a quarter of an inch long, brown mottled with shades of red and yellow. They are seldom seen on the plants as they fly away at the slightest disturbance. The bugs puncture the stalk, stems and buds, causing small black spots. Growth of stung part is severely checked, causing a shortening between nodes of the plant, shortening of stems, and causing buds to open one-sided or to fail to open at all. Badly infested plants are short, 'very bushy and never produce presentable blooms.' DDT has proven highly effective in the control of this troublesome pest which has been very difficult to control before.

THRIPS are very small, light greenish-yellow to dark brown insects which may be found by close examination of unfolded leaf tips and among petals of the flowers.

A magnifying glass will aid in finding them as they are almost invisible to the naked eye. They cause malformed, dark spotted and blistered appearance of the leaves and often result in stunting of the plants. They are easily controlled with DDT. The Tarter Emetic and brown sugar spray, previously recommended, is still considered an adequate spray material.

Considerable success in keeping down the ravages of pests has been obtained by some growers by frequent, over-head watering, during the hottest part of the day. The water is turned on for a couple of hours every two or three days. This method is more practical on light, well drained soils than on the heavier soils which may become saturated to the detriment of the plant.

DISEASES rob the plants of vitality, and in the case of some diseases, eventually destroy the plants. Control methods require destruction of all infected plants as the symptoms become apparent. Control of insects prevent spread.

MILDEW, common in the fall, is well-known. Control by dusting the under side of lower leaves with dusting sulphur, about Sept. 1st. One application will suffice for the season.

After the frost has destroyed the plants in the fall cut the stalk off at the ground. An ordinary saw is fine for this. If possible leave the clump in the ground for a week or ten days before digging. A long tined fork is best for digging the clumps. Be careful not to break or even strain the necks of the tubers. One person, with a fork, on each side of the clump to be dug can lift the clump out with less damage. Do not leave the clumps exposed to the sun or wind for more than a few minutes. If the clumps are too moist to store at once dry them off a bit in the shade or basement. Cut the stalk off to within a couple of inches of the crown. This largely helps to prevent stem rot later. Store the clumps in containers well lined with newspapers to keep out the air as much as possible. Keep the containers in a cool frost-proof basement. After the clumps have been stored for three or four weeks examine them for stem rot or other decay. If decay has set in leave them exposed to the air for a day. Splitting the clumps in two will help prevent stem rot. Trim out any decayed parts and dust with sulphur. A little sulphur sprinkled over the clumps when they are put in the containers will prove beneficial. If the clumps show signs of shriveling moisten them with a little water and add more covering.

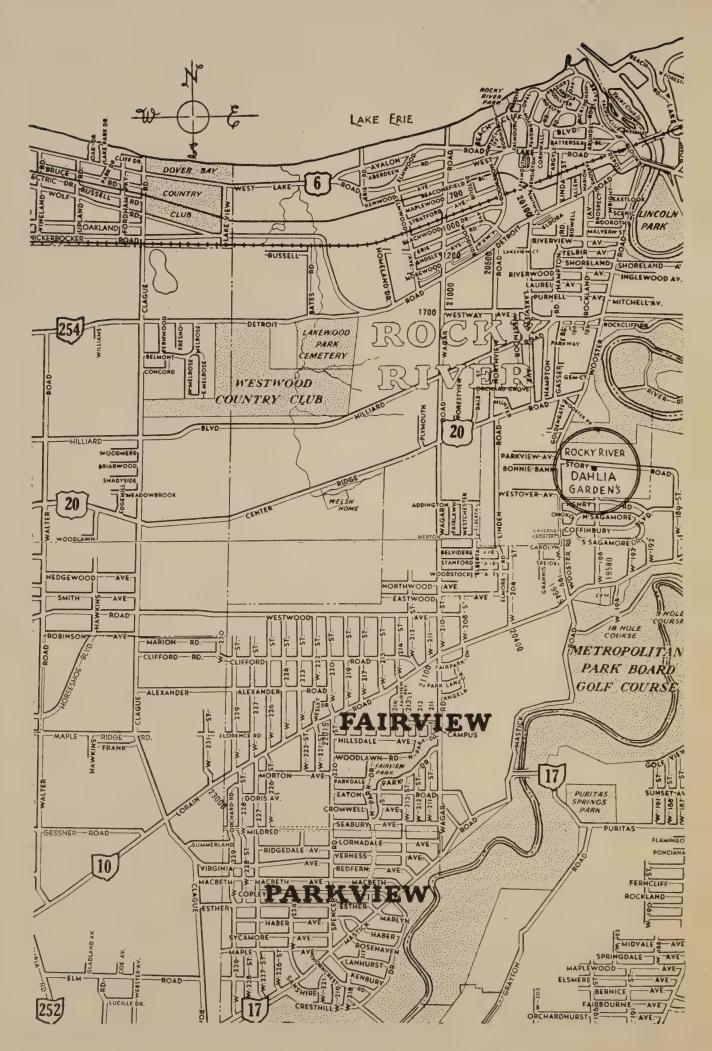
The clumps may be divided at any time but it is best to wait until the eyes or sprouts show distinctly. Never plant the entire clump. For best results divide it so that there is but one sprout to each division. Usually good clumps will average four or more divisions.

We will be glad to answer any further questions regarding these or any other phases of dahlia culture. OUR SERVICE DOES NOT END WITH THE SALE.



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